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PRACTICAL SUGGESTIONS

ON THE

SALE OF PATENTS,

WITH

FORMS OF ASSIGNMENT, LICENSE, CONTRACT, POWER OF ATTORNEY TO SELL RIGHTS, &c. MANY OF THEM ORIGINAL,

AND

INSTRUCTIONS RELATIVE THERETO,

WITH

HINTS UPON INVENTION,

AND THE

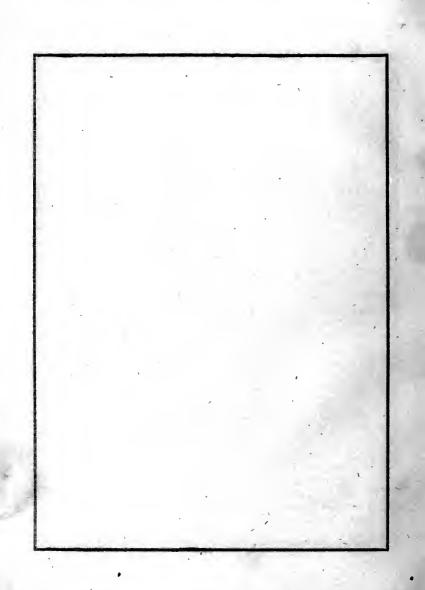
UNITED STATES CENSUS.

BY WM. EDGAR SIMONDS,

ATTORNEY AT LAW, SOLICITOR OF PATENTS.



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PRELIMINARY.

Having made a really meritorious invention, and having secured a patent thereupon, the battle of the inventor, who would sell his patent, is but just begun. Heretofore he may have done some good skirmishing, but now he must face the music of solid battle.

All along till now, from the first crude conception of the invention, on through its various stages of trial and experiment, till the device stands forth completed, and yet on through the ordeal of the Patent Office, till its parchment, ribbon and seal assure the inventor of its protection, he is usually sustained by an enthusiasm which suffuses his whole being with its rosy flush. In a sort of vague way, it has, all along, seemed to him that when his patent should issue, his labors would be done, and he would thenceforth rest on his well earned laurels. Not that the situation has thus stood forth in his mind, clearly and sharply defined, for it rarely occurs to an inventor to seriously consider upon what will be the state of affairs at this juncture, till the progress of events brings him to it, but the cloud which hovered over this bit of promised land roughly assumed this shape.

When the inventor has finally received his patent, and read and re-read it some dozens of times, it begins to occur to him that he will just thrust in his sickle and reap a little of the golden harvest, which imagination has, all along, been sowing for him. Plainly, he looks around for a purchaser, and with a kind of astonishment, waking up, as it were, from a dream, he finds that purchasers do not stand around ready to exchange their filthy lucre for

his invention. Generally unaccustomed to the ways of business and of business men, he finds himself, in a short time, as helpless in his endeavors as can well be imagined. He does not know what class of men will be most likely to take an interest in his invention, nor how to reach them, nor what to say to them. Not rarely, after a year or so of this blind groping, disgust with the whole thing sets in, and the inventor renounces this and all other inventions forever.

This has been the experience, over and over again, of thonsands upon thousands of inventors, and in multitudes of cases where a purchaser has been found, the invention has been sold to him for a song, and the buyer, applying business principles to the management of the invention, has realized the lion's share of the money from it.

The Patent Office Reports are full of useful devices, which have never been introduced into the markets of trade, and which, it is easy to say, would have netted their inventors considerable sums of money, if they had been properly brought out in their time.

It is partly with the purpose of indicating to this class of inventors to whom they should present their patents for sale, and how to present them, that this work has been projected.

It must not be supposed that all inventions are salable, or that the directions hereinafter contained are infallible! Some inventions are very far from being improvements, for though they may be very ingenious, yet they are neither simpler, more efficient or cheaper than the common devices in use for the same purpose, and consequently there is no money in them. Such inventions may sometimes be sold to men with more money than good judgment, yet the cases where this can occur are so few, that it is not worth while to place any dependence upon them.

It is, however, believed that a person will rarely fail to dispose of an invention of any merit, if he takes the pains to understand and intelligently act upon the suggestions hereinaften contained.

PATENT BROKERS.

Almost, if not quite, every issue of various scientific and mechanical periodicals are adorned with the advertisements of parties who hold themselves out as making a business of buying and selling patents, almost always strictly "on commission." The following, omitting names and localities, is the actual advertisement of such a party, as it appeared from week to week:

"PATENT RIGHTS SOLD ON COMMISSION,
And Valuable Inventions introduced by the most experienced Patent Salesmen in the Union. * * * No charge for our services, unless successful," etc.

This is a fair sample of a whole class of advertisements.

A letter addressed to one of these advertisers elicited the following reply:

" Dear Sir :

Your favor of the 2d is received. We charge from \$50 to \$250 for expenses of negotiating Patents, and 10 to 15 per cent for commission.

Yours, truly,

A letter sent to another elicited the following reply:

Dear Sir:

Your favor of the 7th is received. We have been so taken up with other matters, have scarcely had time to reply. Our terms require the patentee to furnish \$100, with which to advertise his patent, furnish one perfect model or drawing, and allow us forty-five days within which to make the sale," etc., etc.

Yours. Respectfully.

Similar answers were received to letters written to others of these brokers. They were invariably accompanied by circulars, describing in glowing terms the advantages the senders were able to offer. There was a striking similarity among these circulars, and, in one case, two were found, parts of which were identically the same, word for word, although they issued from offices more than a thousand miles apart.

It will be observed that these patent brokers always advertise to sell on commission. Their letters and circulars disclose that there is always an advance fee, varying from \$25.00 to \$250.00, which can hardly be said to be in conformity with the terms of the advertisements. Commission houses engaged in the sale of other articles always pay their own expenses, and not unfrequently advance money upon goods consigned them, before they are sold. For a patent broker to first advertise to sell patents on commission, and then, afterwards, to charge an advance fee, ought, at least, to subject him to suspicion.

Another thing—it is difficult to see what advantages a patent broker can have over the patentee, if the latter is once made acquainted with the way to reach probable customers. The broker certainly cannot understand the nature of the invention better than the inventor, and besides, as the buyer well knows that the broker must have a large commission from the price realized, he has an incentive to buy from the inventor, and save this commission.

The broker will probably claim-

First, that by education and experience, he is better qualified than inventors in general, to set forth the advantages of the invention, and the profits to be derived therefrom; and,

Second, that he keeps an open office, at a settled place, where a person seeking investments in patents may come, examine, and select.

To the first argument it may be replied, that the ability to well set forth the advantages of an invention is not necessarily incident to the occupation of a patent broker; and to the second argument it may be replied that the legitimate market for inventions is found among those who are engaged in manufacturing or selling articles akin to the invention on sale, and that this class of men will, as a rule, display their usual shrewdness, and much prefer to deal with the inventor, at first hand, and thus save the heavy commission, which they well know the broker must receive.

The sum of money which these brokers require as an advance fee, will, in most cases, pay all the expense of presenting an invention to all that class of persons who will be likely to buy it, which is all that the brokers will promise to do, and the invention is, meanwhile, entirely within the control of the inventor.

These remarks are based upon the supposition that the advance fee paid to the broker is wholly and honestly appropriated for advertising, etc., about which a person is justified in entertaining grave doubts.

At any rate, it is better for the inventor to wait till he has exhausted all the unequivocal resources at command, before resorting to this.

PREREQUISITES.

1. MODELS.

It is absolutely necessary, in offering a patented invention for sale, to have one or more perfect working models. If the invention is a machine, and not too large and costly, and it is within the inventor's means, he should construct, or have constructed, at least one full sized machine that will work to perfection. If, beyond question, the machine is too costly to allow of the inventor's building one, then he should have in its place complete, artistic drawings in elevation, plan and detail.

In making a model, it is not enough to construct a rude device, which, in a halting and awkward way, will illustrate the principle of the improvement. The machine should be most carefully and perfectly made. The mass of minds will much more readily understand and appreciate the principle of the machine if the mechanical execution is perfect. Whatever the after made machines may be, the first one should be as near perfect as possible. The inventor will usually find that, at his best, he will have enough to apologize for, without being responsible for poor workmanship, It is much easier to interest a crowd in a fine piece of mechanism, even if the device be old, than in a new but roughly made invention. The tea, coffee and spice merchants understand this, and take advantage of it, when they put in their windows handsome specimens of small steam engines, which are supposed to be always grinding fragrant Mocha or Old Java, the merchants well knowing that half the people who go by will take a look at the polished and painted machinery, and will thereby be drawn to look at their merchandise,

If the invention is a small article, as a shirt stud, a mouse trap, a toy, or a clothes line holder, it is best for the inventor to have quite a number made, that he may send samples to those who may become interested in the invention, if it should be found desirable. If the invention is a new compound, or a new process, the inventor must provide materials, etc., for explaining and illustrating the process, or the effects of the new compound.

2. FIRST COST.

Another necessity, in offering a patent for sale, is to be able to show just what the first cost of the article is. If the invention is some complicated and costly machine, the inventor must show, either from his own knowledge, or the calculations of some competent person, what is its first cost.

A competent person would be a civil or mechanical engineer, or a machinist, or other mechanic of experience in constructing other machines of the same general nature. If a responsible party can be found, who will agree to furnish the machine well made, for some certain sum apiece, this is an important item to be had.

If the invention is some small device, and not costly, the inventor should have some dozens, or, better still, a few hundreds of them made, so as to get at the exact first cost. To find a responsible party, who will undertake to make the articles for a certain sum per hundred, per gross, or per thousand, is also important here. The difference of two or three cents, in the first cost of small articles of general use, often determines who shall command the market; in other words, who shall make money from the manufacture, and who shall lose.

If the invention is a new process, the inventor must be amply prepared to show the cost of his process, as compared with that in common use for the same, or similar purpose.

3. THE PROFIT

The profit made on a single article is, of course, the difference between the first cost and the retail price at which it is finally sold to the consumer. To determine the amount of this profit upon a new invention is a necessary thing, before offering it for sale. The whole profit is divided into three, and sometimes four parts, viz. the manufacturer's profit, the wholesale dealer's profit, and the retail dealer's profit. The manufacturer sells to the wholesale dealer, the wholesale dealer to the retail dealer, and he to the consumer. There is, sometimes, intermediate between the manufacturer and wholesale dealer, the jobber, but the writer fails to see the use of such an intermediate, and if he is made use of, his profit should be a per centage on the profit of the manufacturer, so that

In making the division of profits, it is not necessary to consider the jobbber at all. The retail price of the article should be fixed as is commensurate with the allowance of fair profits to each of these parties. If the invention is an improvement upon an article in common use, as for instance a flat iron, and the first cost of the article is not greater than the first cost of the common article, then it is probably best to adopt just the scale of profits which obtains in the trade with regard to the common article. An inquiry put to a friendly dealer in the articles upon which the invention is an improvement, will elicit what these profits are. If the first cost is somewhat greater, then the retail price should be correspondingly advanced, the scale of profits being kept at about the same ratio of correspondence. If the first cost is less than that of the common article, it is probably advisable to keep the retail price up to that of the common article, and thus give larger profits.

There is no general correspondence of profits to these three parties, on different articles. The profits on different manufactures differ widely, and with no reference whatever to a common standard. The only rule that can be given, in this regard, is, to ascertain the scale of prices and profits which prevail from the manufacturer to the consumer, in the trade, upon articles which are nearest like the invention under consideration, and then to assimilate, as far as possible, the profits upon the new article to this scale, varying, however, as any good reason may dictate. If the invention is a new process, the inventor must be prepared to show the gain in using the new process, as compared with the old, and the increased profit secured thereby. The same is true, if the invention is a new machine for producing an old article, as, for instance, drain tile.

4. THE MARKET.

Having ascertained the first cost of producing the article invented, and having fixed upon the profit to be derived from a

single article, the next step is to effiquire how extensive a market is offered to the invention.

If it is an invention useful to both sexes, to children and adults alike, it will have for a market the whole population of the United States, over thirty-eight millions of souls. If useful to adult males only, the market will be about one-fourth of this number. This thirty-eight millions of population is composed, roughly, of males and females in about equal proportions, and each of these divisions is composed of about one-half adults and one-half children, so that, if the invention appeals to persons irrespective of their avocations, the market for it is readily computed. If the invention is one which will be useful in every family, the market will be about one-eighth the whole number of souls, as on an average there are about eight persons in a family.

The full census report for 1870 will probably contain such full statistics of the different trades, professions and callings of the people of the United States, that there can be readily gathered from it how many there are of any class or classes of persons to whom an invention may be of particular utility, and the whole of such class or classes will constitute the market for the invention.

Instead of being directly useful to any class of persons, an invention may be an improvement in the manufacture of some article, as flour barrels, for instance, and then it is necessary to ascertain the actual annual production of this article in the country; or, it may be an improved process, say of smelting iron, and then it is necessary to find how many tons of iron are annually smelted. The census of 1870 will be a great aid in ascertaining most, if not all of this information, but when it is deficient, the librarian of almost any public library can direct an inventor where to find the desired statistics. The wants which inventions are designed to fill are so various, and the statistics which would answer all such enquiries fill so many pages, that it is impracticable to more than direct, in this book, as to what information is needed.

One element which must be taken into account in determining the extent of the market for a new invention, if it is an article and not a process, is its durability. If the article, when once sold to the consumer, will last him for ten years, of course the market for that article is not so large as it would be, if, in the natural course of things, it would last but a short time, and then would require to be renewed. Having ascertained the extent of the market for a new invention, the gross profit to be derived from it can be readily computed, by multiplying the profit upon a single article by the whole number which may probably be sold.

B. CAPITAL REQUIRED.

If the amount of capital required to develop an invention, and introduce it to the public, is small, this will be an additional argument to use in selling.

6. PRICE TO BE ASKED.

This is a matter, for determining which no absolute and definite rule can be given. It is pretty safe to say that inventors are rather apt to overestimate than underestimate the value of their inventions. Of course, the more profit there is to be made from an invention, and the larger market there is for it, the more valuable it is. If it appeals to but a small and widely dispersed class, its value will be less. If it is a new and radical improvement in the manufacture of some staple article, as iron or steel, like the Bessemer process, for instance, a half million dollars would be a moderate price for it. If a meritorious improvement on some household article in general use, or some article of dress, or a new and amusing toy, a few thousands might be a fair price. Again, if a really valuable improvement in some important agricultural implement, as a reaper or mower, from twenty to fifty thousand dollars would probably not be exorbitant. In no case can an inventor expect to get but a fraction of the value of his invention, as shown by the gross profit to be derived from it, for he must be able to offer the lion's share of this profit to the purchaser, as an inducement to buy; and, besides, the purchaser will have the trouble and risk of making this profit piecemeal, as it were, from the actual use and sale of the invention, The advice of friends who are in business, especially if their business is such as to make them conversant with the market for the device under consideration, will be of great value in fixing the asking price for a patent. Having fixed upon this asking price, it is then quite safe to lessen it by at least one-fourth of its amount, and on this basis proceed.

7. THE VALUE OF PARTS OF A PATENT.

Having fixed upon the gross sum to be asked for the whole of a patent, it is very easy to determine the value of territorial rights under the same. If the whole value of a patent is ten thousand dollars, a state right will be worth just such a part of the whole, as its population bears ratio to the population of the whole country. Take, for instance, the State of Connecticut. Its population is about five hundred and forty thousand, while the whole population of the United States is about thirty-eight millions. value of the right for this State will be arithmetically expressed $\frac{540,000}{88.000,000}$ of \$10,000=\$142.00; or, not to put too fine a point upon it, \$150.00. But the inventor cannot afford to sell one state at the same rate that he would sell all the states in a lump. The price for a single state should be double of the exact proportion which the one State bears to all the States together, so that the price of the State of Connecticut would be three hundred dollars. This rule, however, should not be stringently applied to any of the Gulf States, nor to any state west of Missouri, except California. for the reason that these excepted states are not as much interested in manufacturing as are their sister states, and for some other reasons, do not offer as good markets,

An advance of fifty per cent over the value, as determined by the population, is enough to put upon these excepted states. No advance whatever, over this value, should be asked for territories. Having ascertained the value of a state in this manner, the value of a single county can be determined in precisely the same way, first finding the value as determined by the ratio the population of the county bears to the population of the whole state, and then doubling the sum. The value of a town may be determined in precisely the same way from the value of a county. The census of the United States, taken in Eighteen Hundred and Seventy, by states and counties, will be found further along. Those who desire to sell rights for towns, will have to procure the more extended census report for this purpose.

8. SHOP RIGHTS.

A "shop right," so called, is the right to use the patent or manufacture under it, at some shop or manufactory; it may be restricted to a certain place, or left unrestricted. It cannot be considered advisable to make sales of this kind under a patent, unless there are strong reasons why the territory should not be sold. As such a right, when no royalty is reserved, is liable to abuse, it is very difficult to fix upon the value of it, for although a factory may have been doing but a small business, previous to the purchase of the shop right, the factory may thereafter expand its business, so as to practically interfere with sales under the patent in all parts of the country.

A shop right should be limited to a certain annual production and to a certain place. If this is not done, an effort should be made to ascertain the annual production of the factory to which the sale is to be made, as compared with the like product of the whole country, and then a proportionate price should be fixed upon the shop right, doubling the value as shown by the computation, in the same manner as was directed for fixing the value of state rights.

There are some kinds of patents under which it may be advisable to sell shop rights; as, for instance, an improvement in the manufacture of steel. The greater part of all the establishments for making steel will be found congregated in three or four manufacturing centers, and the proper and sensible way of making such a patent available to them, is to sell them each a shop right. It is not difficult, in such cases, to ascertain the amount of the annual production of each establishment, and this amount, as compared with the whole annual production of the whole country, will furnish the basis for computing the value of the shop right, provided, of course, that the gross price for the whole patent has already been fixed upon.

9. ROYALTIES.

A royalty is a duty paid by one who uses the patent of another, at a certain rate for each article or quantity manufactured, or a per centage upon the sales. This method of realizing from a patent is, perhaps, the commonest of any, and if the patent is a valuable one, and the party who manufactures the article acts in good faith, it is generally the most profitable for the patentee in the long run. On the other hand, if the patent is of doubtful merit, the patentee better sell it outright, and it will be best in any ease, if a fair price can be realized, for both parties to the negotiation will then be freed from any danger of injury happening to them from the bad faith of the other party.

The royalty to be asked, where a patent is let out in this way, differs very much with the article which is the subject of the patent. If the patent is an improvement upon an article of staple manufacture, it is best to keep the retail price as low as possible, and to effect this, the royalty must be low, varying from three to five per cent of the amount of the sales. On large and heavy machinery, from five to eight per cent of the selling price is perhaps a fair charge. On agricultural machinery, from six to nine would

not be unreasonable. On small articles of jewelry, fancy articles, toys, dress, etc., etc., a royalty amounting to ten per cent of the gross sales is not too much. In any case, it is not best to leave the manufacturer free to make as many or as few as he chooses of the article, for he may choose to make none, and then the patentee will get nothing, and the manufacturer will still retain his license. All agreements upon royalty should contain a clause that if a manufacturer shall not pay royalty upon a certain minimum number, the patentee shall have the option of declaring the license null and void.

Forms of this kind will be found further on. All such agreements should also contain a condition, that at stated times the manufacturer shall render to the patentee a true and exact account of all the patented articles made and sold by him, since the last account and payment, to which account the patentee shall have the right to require the oath of the manufacturer, and that if then the patentee is not satisfied, he shall have the right to view the manufacturer's books.

If one manufacturer will undertake to supply the whole market, and will fix the minimum royalty which he must pay sufficiently high, then it is best to let him have the sole right to manufacture; but if it becomes necessary to let the patent out to more than one, then the minimum amount of royalty should be fixed upon the same general principle as followed in determining the value of a shop right.

TO WHOM TO OFFER THE PATENT AND HOW TO OFFER IT.

Having settled all these preliminary matters, and having become acquainted with the nature of the various kinds of rights which it is usual to dispose of under patents, the next question to be answered, is, "What class of persons will be the most likely to buy the patent, or rights under it." To this the answer is plain. If it is an article in distinction from a process, it is likely to be most readily sold to some one of that class of manufacturers who are making articles of the same class as this. "How to get the names and addresses of all of such a class?" Answer-there are men in New York and other large cities, who make it their business to furnish, for a reasonable consideration, full and complete lists of all parties engaged in any particular trade, occupation, profession, or manufacture throughout the country. The inventor has, let us suppose, devised a new and useful article of jewelry for gentlemen, say a shirt stud or sleeve button. He, of course, will naturally expect to sell his patent to some manufacturing jeweller, and accordingly he will procure, from one of these agents referred to, a list of all such parties, either in some particular part of the country, or in the whole country.

It is not generally, advisable to procure more than a partial list, at first, because a sale may be made to one of these, and if not, then the list can be readily enlarged, from time to time, as may become desirable.

Having procured such a list of parties, the next thing is to properly present the thing to them, one by one and for this purpose it is advisable to prepare a circular, bearing a good "cut" of the invention, if it be susceptible of such illustration, and containing a concise, but very careful description of the invention and its operation, setting forth its advantages over the common article, or pro-

cess, on which it is an improvement. It should contain a careful statement of the actual first cost of the article or process, supported by facts and figures, and offers of responsible parties, if any have been made, to manufacture at such prices. It should also show what a reasonable retail price would be, as governed by the margins which obtain in the trade for similar articles, and from this deduce the profit to be made on a single specimen. It should further show, by actual statistics, taken from reliable sources, how extensive a market is offered to the invention, taking into account the average life of the article and the whole duration of the patent, and from this should be computed the whole sum to be realized, if the whole market is supplied. This figure will always be a large one. and after making this computation, it is advisable to say, in substance, as follows: -" even if but one-half or one-fourth of the whole market is actually supplied, the gross profit will be," etc., etc. which, being a reasonable supposition, can hardly fail to carry weight. If the claim in the patent is a strong one, it is best to insert it in the circular, and call attention to its strength.

It is, probably, not best to put into the circular the terms upon which the patent, or rights under it, will be sold. That can be better set forth in a letter to accompany the circular. The following circular, tounded upon an imaginary "Improved Collar Stud," will illustrate the general method to be followed in preparing such a circular.

Improved Collar Stud.





LETTERS PATENT NO. 100,010, DATED JUNE 6, 1871.

This is an indispensable article of a gentleman's toilet. It is not only a perfect collar stud, but an equally perfect the holder. All who have ever worn a '' snap' or butterfly tie—and this comprises all American mankind—are well aware of the vexations incident to fastening the loop of these ties over the common shirt

button, or collar stud. Many a hasty, if not profane, ejaculation has been the result of attempting this task. It has often been a matter of equal disgust for a gentleman—a wearer of one of these ties—on reaching home, to find that he has been bravely marching through the streets, minus a neck-tie, which has, in an unlucky moment, escaped the faithless grasp of the common button, or stud.

This little device completely cures these troubles. The loop of a tie is as readily slipped into one of the little hooks, upon the front of the stud, as a hat is hung on a nail, and it cannot escape

therefrom by accident.

The owner of the patent, which has a broad and strong claim, is not in circumstances which will allow him to undertake the introduction and sale of the studs. He will, therefore, dispose of the patent, or rights under it, and asks attention to the following

remarks, which show its great value.

First Cost.—It is made of gold plated sheet metal, commonly known among manufacturing jewelers as "stock plate," and all the parts are struck up by dies, so that it can be made very cheaply, at a cost not exceeding five cents apiece. Messrs. Brazos & Copperman, of Waterbury, Conn., and also Mr. Chas. Ringman, of North Attleboro, Mass., have offered to make them, in quantities. at that price. Of course, if these parties can furnish the studs at that price, the real cost is less, for manufacturers do not generally

carry on their business for fun or philanthropy.

THE RETAIL PRICE.—Plated collar studs, of the common kinds, sell at retail prices varying alt the way from twenty-five cents to one dollar, according to plate and workmanship. No stud, which is as well plated as this, sells for less than fifty cents, and as these last are merely the common kind, with no improvements, fifty cents would be a reasonable retail price for this improved stud, giving, as the profit on a single article, forty-five cents. This allows the manufacturer to sell to the jobber for ten cents apiece, a profit of one hundred per cent; the jobber to the wholesale dealer for fifteen cents, a profit of fifty per cent; the wholesale dealer to the retailer at twenty-five cents, a profit of sixty-six and two-thirds per cent; and the retail dealer to the consumer at fifty cents, a profit of one hundred per cent; so that while the retail price is not nigher than for the common article, the profits of all concerned are enormous, and will make it a favorite with the trade.

THE MARKET.—Of the 38,000,000 of people in the United States, about one-fourth, 9,500,000, are men, and about one-half of these, 4,750,000, are male youth, the whole mass of whom wear

ties, three-fourth's of them, 3,562,500, "snap" ties. One of these studs can be sold to at least one-fourth of this last number, which makes 890,625, on which the owner's profit, at five cents apiece, anyounts to \$44,531.25, and as the average life of a stud is about two years, this sum must be multiplied by eight to give whole profit for the seventeen years duration of the patent, which gives the comfortable product of \$356,250.

THE CAPITAL REQUIRED is very small, and can be rapidly

turned over.

For TERMS, ETC., address

GILES GENIUS. Hartford, Conn.

This circular should be printed in good taste. If the inventor can afford to put it on heavy, tinted paper, in some fashionable type, as is the so called "old style" at present, with a red line around the edge for a border, so much the better. The matter of the circular should be written in as clear, crisp and sparkling style as the nature of the subject will admit, and the composition and press work be as perfect as possible.

If the inventor, himself, is not capable of doing justice to the subject, let him find some literary friend, or some other properly educated person, to do it for him. Let the statements be just as strong as the facts will bear. It will be observed that the terms are not given in this circular. This, with some other matters, can better be reserved for a written letter, to accompany the circular. It is advisable to accompany this circular with a written letter, for the reason that the receiver thereof will be obliged, in common courtesy, to give the matter attention enough to understand it, which attention he might not give to a mere circular. Besides, the letter makes the matter more of a personal thing to the receiver, and does not make the terms public, all of which tends to give weight to the matter. The general style may be understood from the following form for such a

(LETTER.)

[Confidential.]

HARTFORD, Conn., Jan. 1, 1871.

Mr. HIRAM HAUTBOY:

Dear Sir:—May I ask your careful attention to the enclosed circular? I believe that the facts set forth therein will show you that I offer for sale a really valuable invention. The figures, making every possible allowance, and then dividing this by a large fraction, show that there is a fortune in this little thing. But I am in no condition to undertake the introduction of the article.

In the first place, I have no means.

In the next place, I am a mechanic, and ignorant of business ways and business men.

You are in a business which will enable you to manufacture

and introduce this stud readily.

I offer you the whole patent for \$5,000. I shall be satisfied to take part cash, and part approved notes. If you do not care to purchase the whole patent, I may be willing to sell you a territorial or shop right, or allow you to manufacture on a royalty.

This offer is made to you alone.

The thing will not be offered to any one else, unless you refuse to buy, when I shall offer it to others in your business. Be kind enough to answer at once. If an answer is not received by me within seven (7) days from this date, this offer is from that date withdrawn.

Very Respectfully,

GILES GENIUS.

This circular and letter should be sent to the different parties mentioned in the list, sending to but one party at a time, and waiting till the expiration of the seven days or other set time, for an answer, before sending to another.

When an answer is received looking toward negotiation, if any definite terms are offered, the inventor should most carefully consider upon it, before rejecting, even if greatly under the price asked, remembering always that all that is made over and above the actual expenses incurred, is clear profit. If a shop right, territorial right, or royalty right is wanted, the suggestions in the foregoing pages, on fixing the value of such rights, will be found of assistance.

If it is thought that better terms can be obtained, it is best to inform the correspondent that the inventor is "greatly obliged for the kind offer made, and will take it into serious consideration," etc., etc. A rule which should be imperative in all business matters, comes into play here. Never be rude or peremptory in declining an offer, but always express yourself in the kindest and pleasantest terms of which you are master,

It is hardly possible that an inventor of any merit can run the gauntlet, in this manner, of all the manufacturers in the country, whose business is of a kind to naturally interest them in the invention, without finding a purchaser.

NEWSPAPER ADVERTISING.

Another method of getting an invention before the public, is through the medium of newspaper advertising. This is more expensive than the method just described, and is not, perhaps, advisable till that fails, though it may be often happily used in conjunction with it. If the inventor can afford it, it is well to have the invention illustrated and described in one or more of the scientific and mechanical publications of the day, of which the Scientific American, and American Artisan, of New York, and the Scientific Press, of San Francisco, are notable examples. Such illustration and description may sometimes, of itself, prove sufficient. If not, it may be followed up by ordinary advertising; or, this illustration and description may be dispensed with, and the advertising confined to the regular advertising columns. In doing this, the advertisement should be inserted in the paper or papers which

are designed to meet the eye of the class or classes of persons to whom the invention is of special interest. Any reliable advertising agent will be pleased, on request, to furnish, free of charge, a list of any required size, extending over the whole country, or any part thereof, which circulate among any special class of people, and the advertisement of the invention should be inserted in one or more such papers, as the judgment and means of the inventor may dictate. It is very much better to insert a small advertisement in a large number of papers, than to occupy a large space in a smaller number. The experience of old advertisers confirms this proportion. If the inventor is not skilled in writing advertisements, it will be best for him, if possible, to get some friend, or other properly skilled person, to write the advertisement for him, for it is no common accomplishment to be able to put into a small space, in an attractive and striking, and yet not vulgar manner, a notice of any thing, which shall say just enough to induce the reader to push further inquiries. Suppose the invention to be an improvement in the manufacture of coach varnish: an advertisement something like the following, would not be inappropriate:

A NEW COACH VARNISH, A most valuable patented improvement in oughly tried and tested. Address Coach Varnish is offered for sale—thoracter. W. COPAL, Huyshope, Conn.

This will occupy but few lines of space, and yet tells enough to interest varnish and coach men therein. It is not advisable to make much parade of the patent, as a putent, for there is something of a prejudice among business men generally, against patents, on account of the great number of humbugs which have been pushed into notice under their guise, but this prejudice vanishes, when they discover that the patent covers a real improvement.

The proper papers in which to insert an advertisement like the above, would be those which are intended for circulation among varnish users, varnish manufacturers and carriage builders, a list of which, with the charge for insertion, the advertising agents can readily furnish. When answers to advertisements are received, they can be replied to by such a circular as that hereinbefore described, accompanied by a letter substantially like that set forth, changed to meet the requirements of the case.

The inventor must not be afraid, if his means permit, to continue his advertising for some little time, for experience has shown that unless a person is more than ordinarily interested in the matter advertised, he has to see an advertisement a number of times before he will take any active step in reference to it.

PERSONAL SOLICITATION.

Patents are frequently sold by personal solicitation, and if the inventor cares to make the sale of rights under his patent his main business, and can get safely through the period of rawness which always attends the commencement stage of all such attempts without giving up the business in disgust, this method of sale may prove, in the end, the most remunerative. The inventor must, however, give his whole time to the business, must have means sufficient to allow him to travel, and must persevere till he learns not to be discouraged at any and all disheartening obstacles he may encounter.

In short, he must make of himself a successful salesman, and a salesman of rather a rare order, a task which is evidently so difficult, that unless an inventor is satisfied he has peculiar qualifications for it, he better not undertake it. If he does, however, see fit to undertake it, a few suggestions may be of assistance. Upon arriving at a town where he proposes to make a sale, he should be provided with a good model or models, and pleaty of circulars containing substantially the matter set forth in the circular hereinbefore described, making the closing part to read—"Rights for sale on the most liberal terms at" (wherever the inventor has his head-quarters). If the place boasts a newspaper, the matter should be duly advertised, and good "local" notice will be found a great help.

Suppose the invention to be a new domestic article, as a knife sharpener, the advertisement might be in substance as follows:

Of course, having interested a man enough to call, the inventor must press upon him by aid of model, facts and figures, etc., the money there is in it for the purchaser. If any resident of the right stamp can be made to assist, by giving him a commission on sales, it will prove a valuable help.

A thing sometimes done by traveling salesmen of patents is, to find some resident who is "up to snuff," as the saying is, and arrange with him that he shall hold himself out as ready to buy a half interest in the territory which it is proposed to sell, and they two, the salesman and the decoy duck, go in search of some third party who will really buy the other half. The price of the territory is put at double that which the seller really means to realize, and when the third party is found to really buy the other half of the right, the territory is assigned to the decoy duck and such party jointly, but no money is paid, except by the third party, and out of this the seller usually pays a commission to the decoy duck.

The fact that a neighbor is ready to purchase a half interest in the right, is a great inducement, usually, to the third party to buy the other half.

Of the morality of such transactions the reader will judge.

If the inventor chooses to take his model in his hand, and attack parties most likely to become interested, at their places of business, he may make sales, but in this case he will find that previous advertising will pave the way for the personal effort.

ITINERANT AGENTS.

In almost every county in the United States may be found persons who, off and on, as the phrase is, make it their business to sell patent rights, traveling about the while for that purpose. It must, in truth, be said that some of these, by their fraudulent practices, have done much toward bringing the business of a traveling salesman of patents into disrepute. These fraudulent practices have consisted in making grossly false representations, as to the first cost of their articles, in taking notes for the whole or part of the consideration of the sales, under the promise to retain them till due so that the purchaser should have a chance to see that their representations were true, before making final payment, and then selling the notes instanter, and the like.

Many of these men, the honest ones, are really good agents to employ, as they are usually willing to bear their own expenses, and take a share of the proceeds of the sales for their pay. If an inventor has a choice among different ones, he should, other things being equal, select the one who has means that make him pecuniarily responsible.

Unless a person has such means, or unless the inventor is satisfied that he is a man of the firmest integrity, it cannot be considered safe to give him an unlimited power of attorney to make sales, nor even then is it desirable, because it is always best to make sure that the agent cannot keep from the inventor any of the funds he may receive, nor put the patent into the hands of a confederate, by means of a bogus sale.

Control over the funds received can be kept, by providing, in the power of attorney, that all cash received shall be deposited to the joint order of the agent and the inventor, and that all notes taken shall be to their joint order.

Control over unadvisable or fraudulent sales can be kept by providing, in the power, that the sales made are conclusive, unless the inventor shall, within—say ten—days, signify his non-acceptance thereof. Forms for powers of attorney, with these or equivalent provisions, will be found further on.

STOCK COMPANIES.

A great many patents upon inventions which are either considered very valuable, or which require a large capital, to make them available, are realized from by making them the property of stock companies, which are either specially chartered by the state or national legislature, or are organized under the joint stock laws which prevail in most, if not all the states. This a perfectly legitimate, and often a very easy way of realizing money from an invention.

The inventor takes his pay either wholly in cash, or from stock in the company, or partly in cash and partly in stock,

The *modus operandi* is as follows:—the inventor, lct us say, wishes to realize \$10,000 in cash, and \$10,000 in stock, and it is necessary to have \$15,000 actual cash capital to work the patent.

In such a case the nominal capital of the company may, generally, well be put at \$100,000.

We will, first of all, reserve \$15,000 of this nominal capital to be used in securing the aid and countenance of influential men, to be given away by the inventor for this purpose, though of course this part of the operation is usually confidential between the inventor and those whose aid he seeks. The inventor must therefore reserve for himself, in all \$25,000 of the nominal stock.

This leaves \$75,000 in stock to be sold, whereby to realize \$25,000 in cash, \$10,000 for the inventor and \$15,000 for actual cash capital.

Now, to raise \$25,000 cash upon \$75,000 nominal capital, each share sold needs to pay but one third of its nominal value, so that there is a great inducement in this for parties to invest in the stock.

Of course to make this operation successful, the inventor must be able to show, by facts and figures, a good prospect of paying from six to ten per cent dividends upon the nominal capital, and if he is able to do this, and acts with a fair amount of shrewdness in securing the help of two or three influential men, by the aid of the \$15,000 in stock which he has set aside for this purpose, his task is very easy.

The inducements he may hold out to investors are not only the hope of gain from dividends, but the prospect of becoming officers of the company, as president, secretary, treasurer, director. etc. When such companies are organized, it is very common for the company to retain the services of the inventor in some capacity, so that the inventor is well rewarded by present eash, by stock, and by future employment.

If the inventor is content to take his pay entirely in stock, then his task is just so much the easier, and if he is able to organize his company without giving away stock, this again lightens his burden. If the inventor is willing to put in his invention against, say, \$10,000 actual each capital, then he may be able to find two or three men, or possibly one man, who will put the cash against the invention; and, in short, there are numberless ways in which this programme may be varied to meet the circumstances of each particular case.

The details of the organization of such companies must, of course, be performed under the direction of some competent lawyer, who will see that the local laws governing such matters are duly complied with, but farther on, in the part of this book devoted to forms, and instructions relative thereto, will be found a form for articles of association of this kind, such as is in use under the laws of the State of Connecticut, which laws are substantially the same as those of other states upon the same subject.

HOW TO WORK A SPECIALTY.

The following article, taken from the "Chemist and Druggist," published in London, although specially applicable to the sale of patent medicines, will be found very suggestive to all those who have patented articles to introduce:

"Without having the pretension to disclose any new systems, the writer will rapidly note a few of the various methods of establishing and developing the sale of proprietary articles, which have come under his personal observation, during a somewhat extended experience in England, France and America. Patent medicines, perfumeries, toilet preparations, dietetic productions, and other specialties are now so numerous, and in many instances are pushed so vigorously and with so much skill, that when it is proposed to

launch any new item, or develop the sale of one already partially established, the magnitude of the task appears startling. To attract attention to any preparation, however good and well adapted to the wants of the public, is a task of such an expensive and laborious character, that a brief study of the systems followed by the successful men of the day, in this field, may be regarded as a topic of general interest. Whatever may be the scientific opinion in regard to the leading proprietary remedies in vogue, and however much their authors and compounders may lack professional status and a legitimate endorsement of their preparations, it is quite evident that hundreds of these men have succeeded in attracting public notice to themselves personally, as well as acquiring a great celebrity for their articles, by the unusual enterprise, skill, and general business talent displayed in the management of their specialties. It is not difficult to regard such men as likely to achieve success in almost any matter they may undertake, endowed, as they generally are, with the personal characteristics which emphatically command success. Therefore, it is quite correct to suppose that the great fortunes we hear of being accumulated by noted proprietors of specialties, are not exactly happy accidents, but the result of patient and intelligent labors, united to a judicious audacity and liberality.

"The personal acquaintance of the writer with a number of such men of the three nationalities already named, will enable him to indicate a few of the salient points in their methods of management. While it is quite true that many articles of questionable merit have, by mere force of publicity, been established on a remunerative sale, it is without any doubt essential to the success of preparations in general, that they should possess positive merit, and be well adapted to meet some general public want, otherwise the efforts made to introduce them will be full of difficulty. The notion sometimes heard—that advertising will make anything sell—is simple nonsense, as every large advertiser knows. Advertising will undoubtedly ereate a temporary demand for almost any article

but unless the article itself responds to an evident public need, and is one which is intrinsically good, and likely to make its way on its own merits, as soon as the public attention to it has been gained, it will prove anything but a profitable enterprise, to make a serious campaign on such a basis.

"At this point, let a word be said on the utter inutility of investments in publicity, to develop sales of worthless and trivial articles; and also let it be noted that all successful patent medicines, notwithstanding that they are oftentimes popularly denominated nostrums, quack remedies, &c., must, and often do possess intrinsic value, otherwise they could never attain any sale of magnitude or permanency. It is quite true that the enormous aggregate sales of patent medicines throughout the globe, a sale which has been extending with tremendous rapidity for the last decade, evidences a great popular want of cheap remedies which may be obtained in the shops, and which in many instances renders the expensive services of a medical man quite superfluous.

"The profession in France has legitimised patent remedies, and the popular verdict in other countries has been in their ravor. In America, where, in consequence of the vastness of the territory, medical aid sometimes cannot be obtained for miles, these popular compounds are oftentimes of great service in maladies lacking gravity.

"In proceeding to notice more particularly the business aspects of the topic, it may be remarked that the introduction of a compound of undoubted excellence may be accomplished at a limited outgo, by adherence to certain very common sense methods too often lost sight of by enthusiastic projectors. The style of get-up of an article has oftentimes a considerable influence upon its success. The best illustrations are undoubtedly furnished by the French, who have, in the forms of their bottles, style of typography and wrapper, generally excelled the English and American productions.

"The retail prices should be in even shillings, francs, or dollars, although a contrary custom prevails in England and France; and where various sizes of bottles are introduced, the prices should be the multiple each of the other, and the larger sizes contain relatively more than the smaller ones. The retail prices should always be printed upon the outside wrapper. The sending out of bottles of patent remedies without an outer wrapper is objectionable. The directions for use should always, no matter how voluminous they are, be wrapped around the bottle or box, inside of the wrapper; it is decidedly objectionable to have them furnished separately, to be delivered by the retailers.

"The American plan of printing the title and other matter on the different sides of the bottle, in the four languages most in vogue, as well as full directions in all these languages, in the prospectus which is wrapped inside, is an excellent one. In the case of small toilet and remedial articles, the plan pursued in England of getting them up in counter cases is very effective for the purposes of introduction and advertisement, but too expensive to admit of after supplies being furnished in that way. The Americans have given a great deal of attention to putting dozens and half dozens in pasteboard boxes, with very bold outside labels. These, regularly arranged upon the shelves of a country druggist's shop, form a very cheap and effective advertisement, and also keep in good condition any bottles that may not be exposed for sale in the large plate glass counter show-cases so much in vogue there. For shipment, these paper boxes are packed generally in wooden cases of one dozen each, and these gross boxes are supplied without charge, the four sides being, when sent out by the proprietor, boldly branded with the title of the article. It is a common thing to notice in American druggists shops, piles of these wooden cases many, no doubt, innocent of contents-but all forming very cheap and effective advertisements. The array of paper box "dummies" is also something wonderful, on the shelves and in the front windows, No box of this kind is ever destroyed, as long as there is any vacant space in the shop, its value in catching the eye of the customer being too great. These paper boxes and wooden cases are also well supplied with show bills, and small cards to hang up at odd corners of the shop, and a few dozen circulars for the counter, In some instances the gross cases contain beautifully gotten up illuminated show-cards, handsomely framed.

"From these details it will be perceived that the Americans are fully alive to the benefit to be derived from furnishing the retail dealer with a splendid supply of weapons for publicity in his shop. As the druggists there are much more willing to exhibit show bills and cards than the chemists in Europe, the rage for handsome ones has been carried to a most lavish point. Elaborately hand-painted gilt glass cards, three or four feet square, are quite common in the best shops, being furnished gratis by the leading patent medicine and perfumery makers, at a cost to themselves oftentimes of two or three guineas each.

"In deciding upon the retail price of an article about to be introduced, too much attention cannot be given to the discounts which will have to be made to the different classes of buyers in the trade. There should always be a first abatement from the retail trade of one-third, for any quantity to one who buys to sell again, and to the same party a further discount of, say, ten per cent, when a whole gross is purchased—this last to be supplemented by an additional discount of ten or fifteen per cent, to the wholesale houses on five or ten gross lots. As the class of goods in question is essentially a monopoly, the proprietor has power to fix his prices as arbitrarily as he chooses, but he will consult his interest by making liberal discounts, selling for net cash only, and in no case, confidentially or otherwise, giving any advantage to one buyer over another. A printed tariff to wholesale houses should he issued, and rigidly adhered to as to quantities, cash, and days allowed for payment. All changes in this tariff should be notified some considerable time in advance of the period when the change will take place, so as to give wholesale dealers time to arrange advantageously, in case of their being either over-stocked or in short supply. These notices should be given simultaneously, that no one man may have any advantrge from early information of contemplated changes. Having experienced the desirability of this uniformity of dealing with the trade in specialties, the writer is disposed to lay great stress upon it. The proprietor of an article must obviously, in arranging his wholesale and retail prices, allow himself a handsome margin, the expense for publicity and otherwise, aside from the cost of manufacture, being likely to be so onerous. If, as is often the ease, an article is got up by a chemist, in the midst of the ordinary routine of his shop, without adding anything for expense of labor, he should not, on that account, omit to include in his estimate the probable cost of bottling, packing, etc., as in all articles of extended sale, a separate organization and force becomes essential. The probable fluctuations in the ingredients of which the preparation is composed, should also be carefully taken into account, as the variation of a price once fixed upon a proprietary article is likely to be damaging. The heavy war tax upon spirits in the United States, a few years ago, (now reduced,) nearly ruined the smaller grade of patent medicine men there, and they were obliged to adopt prices in many cases fifty and one hundred per cent. higher, which resulted in placing their preparations quite out of the reach of men of moderate means. Coming to the actual work of introducing an article, it is better for persons of moderate means to canvas in the outset large country towns, than to attack the great cities. Should abundant means be at command, the metropolis had better be taken in hand first, as the country naturally sympathises in the demand for a preparation which has a metropolitan vogue, even where no local expenditure is made for publicity.

"Whatever field is taken up in the outset, it should be thor-

oughly worked, and the article well made known there, before wasting time and scattering efforts in other quarters. No more common mistake is made by sanguine projectors of specialties than in endeavoring to grasp the whole body of the people at once. Any advertisement contracts made should be for cash, or nearly so. It is so easy to get out of one's depth in making contracts payable out of prospective profits. When an article is already launched, and has been favorably received, the extension of its advertisements with a certain amount of boldness is no longer so pure a risk.

"The question of newspaper advertising is so broad a one, that the limits of this article will hardly suffice for its treatment. Briefly, it must be quite clear that all feeble, cheap advertising, in the obscure columns of the papers, has but little effect. shrewdest advertisers of the day adopt the most expensive methods. choosing the most costly localities in the principal journals. few lines at several shillings a line, in a prominent part of a newspaper is a better investment than a lengthy advertisement in an obscure column at half the expense, Continuous advertising in every issue of a daily or weekly newspaper, is a great waste of money, If six advertisements on six successive days lead to an expenditure of ten pounds, it would be much more effective to insert one advertisement once a week at an expense of half the money. Small announcements persisted in, if appearing continuously, will undoubtedly, in time, produce a favorable result; but, for immediate sales, resort must be had to bold, and sometimes to lengthy announcements. A dignified phraseology should always be adhered to, but any novelty that can be secured in point of typographical display, is eminently desirable,

"It is very questionable if the paragraph notices of a facetious character, now somewhat in favor with advertisers in the leading dailies, are really effective. The locality chosen is the advantage, if there is one; but, obviously, the notion that the public are supposing they are absorbing the regular reading matter of the news-

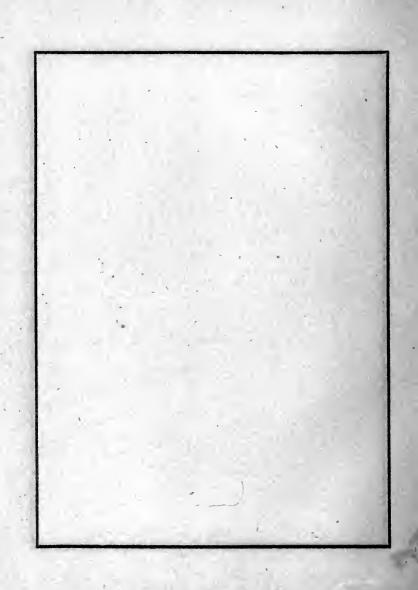
paper, is presuming too much on their credulity. Of all forms of advertising, none approaches the well established daily newspaper. Where there are several published in one town, it is better, in default of ability to grasp them all, to choose the best one for the article in hand, and go in liberally. Small advertising does not pay.

"When an article is being introduced, there should always be affixed to all advertisements the name of one or two shops in the town where it is kept on sale. This saves much disappointment on the part of intending buyers, who often apply at a dozen places without success, and ultimately give up their idea of obtaining it. "For sale by all chemists," is a very bad line to add to an advertisement of a new article. Nine out of every ten dealers will say, "We never heard of it before," and the tenth one will offer to procure it; while all (if in America) will suggest that "It's a new thing," "Don't know much about it yet," "We have something of our own of the same kind quite as good." All of these influences have to be fought against by the projector of something new, and even at the risk of making some shops jealous, it is much better to name one or two where the article can surely be obtained.

"Nothing is so successful as success. Once an article is well established, the chorus is unanimous in its favor from all the shop-keepers; during its struggling infancy, something seems to whisper to them to give it a kick.

"Previous to quitting the party "who never heard of it before," it may be well to direct his attention to the eminently modern plan of advertising to the trade, now so much in favor with the most intelligent body of advertisers. The last few years have witnessed the establishment of a most excellent series of class and trade journa's in several countries—more especially in England—addressing themselves to readers of various professions and kinds of business. To all projectors of new specialties, this class of journals is invaluable, as well as to the proprietors of such estab-

lished ones as it is desirable to keep alive in the minds of the trade. A great step in advance is made, if the trade can at once be thoroughly informed respecting a new article. In default of ability to inaugurate an extensive range of advertising to the public, a most important impression can be made by bold announcements in suitable class journals; and in conjunction with an elaborate programme of publicity, the columns of this branch of the press offer palpable advantages. These journals, although as yet in a successful infancy, are destined to occupy a greatly enlarged position and influence. The day is rapidly approaching, in fact has arrived, when the intelligent chemist must regularly peruse a periodical specially edited and published for himself and his confreres, in order to keep up with the advances made in the scientific branches of his profession, as well as to be thoroughly posted in its special trade intelligence. Obviously, these are among the earliest channels in which originators of specialties should communicate with the trade. beginning by at once making their articles known, by name at least, to the whole body."

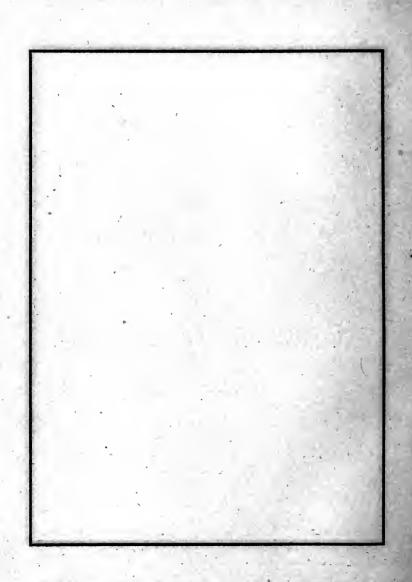


FORMS AND INSTRUCTIONS

FOR

Assignments, Grants, Licenses,

CONTRACTS, ETC.



ASSIGNMENTS AND GRANTS.

An Assignment of a patent right is an instrument in writing, conveying either the whole interest in the patent, or an undivided part thereof.

A Grant is an instrument in writing, conveying an exclusive territorial right under a patent.

The following is the text of the law with reference thereto; Approved July 8, 1870.

"Section 36. And be it further enacted, That every patent, or any interest therein, shall be assignable in law, by an instrument in writing, and the patentee, or his assign, or legal representative, may, in like manner, grant and convey an exclusive right, under his patent, to the whole or any specified part of the United States, and said assignment and grant, or conveyance, shall be void, as against any subsequent purchaser or mortgagee for a valuable consideration, without notice, unless it be recorded in the Patent Office within three months from the date thereof."

The following quoted paragraphs are from the Patent Office "Rules ;"

- "A patent may be assigned, either as to the whole interest, or any undivided part thereof, by any instrument of writing. No particular form of words is necessary to constitute a valid assignment, nor need the instrument be sealed, witnessed, or acknowledged."
- "A patent will, upon request, issue directly to the assignee or assignees of the entire interest in any invention, or to the inventor and the assignee jointly, when an undivided part only of the entire interest has been conveyed."
- "In every case where a patent issues or reissues to an assignee, the assignment must be recorded at the Patent Office at

least five days before the issue of the Patent, and the specification must be sworn to by the inventor."

"The patentee may grant and convey an exclusive right under his patent, to the whole or any specified portion of the United States, by an instrument in writing."

"Every assignment or grant of an exclusive territorial right must be recorded in the Patent Office, within three months from the execution thereof; otherwise it will be void as against any subsequent purchaser or mortgagee for a valuable consideration without notice; but, if recorded after that time, it will protect the assignee or grantee against any such subsequent purchaser, whose assignment or grant is not then on record."

"The patentee may convey separate rights under his patent to make, or to use, or to sell his invention, or he may convey territorial or shop rights which are not exclusive. Such conveyances are mere licenses, and need not be recorded."

"The receipt of assignments is not generally acknowledged by the office. They will be recorded in their turn within a few days after their reception, and then transmitted to the persons entitled to them. A five cent revenue stamp is required for each sheet or piece of paper on which an assignment, grant, or license may be written."

The fees for recording assignments, grants, contracts, or any other paper which should be forwarded, with the papers for record, to the "Com'r of Patents, Washington, D. C." are as follows:

In sending papers to the Patent Office for record, the papers and the money should be acompanied by a letter, stating that the enclosed papers are for record, and that the enclosed money is the fee for the same, and stating the address to which the papers are to be returned.

FORMS.

NO. 1. ASSIGNMENT OF THE ENTIRE INTEREST, BEFORE THE ISSUE OF THE PATENT, (BY SOLE INVENTOR.)

In consideration of one dollar, to me paid by John J. Smith, of Hartford, Conn., I do hereby sell and assign to said John J. Smith, all my right, title and interest in and to a certain invention in plows, as fully set forth and described in the specification which I have prepared, (if the application has been made, say "and filed,") preparatory to obtaining letters patent of the United States therefor, and I do hereby authorize and request the Commissioner of Patents to issue the said letters patent to my said assignee, for the sole use and behoof of said assignee, and his legal representatives.



Witness my hand this 1st day of June, 1871.

CHARLES CHANDLER.

The words and figures in italics denote those which are to be changed to suit different cases, and the same is true of all the following forms in the book, except that where changes are to be made from the singular to the plural, or *vice versa*, italies will not be used.

NO. 2. ASSIGNMENT OF AN UNDIVIDED INTEREST, BEFORE ISSUE OF PATENT, (BY JOINT INVENTORS.)

In consideration of one dollar, to us paid by John J. Smith, of Hartford, Conn., we do hereby sell and assign to him one undivided half interest in and to a certain invention in plows, as fully set forth and described in the specification which we have prepared, (if application has been made say, "and filed,") preparatory to obtaining letters patent of the United States therefor. And we do hereby authorize and request the Commissioner of Patents to issue said letters patent to said assignee and ourselves jointly, for the sole use

and behoof of said assignee and ourselves, and his and our legal representatives.

D 50 REV. (L.

Witness our hands this 2d day of June, 1871.

CHARLES CHANDLER,

DARIUS DOMBEY.

NO. 3. ASSIGNMENT OF ENTIRE (OR UNDIVIDED PARTIAL) INTEREST, AFTER ISSUE OF PATENT, (BY SOLE INVENTOR.)

In consideration of five hundred dollars, to me paid by John J. Smith, of Hartford Conn., I do hereby assign and sell to said John J. Smith, all my right, title and interest, (or one undivided hulf interest) in and to the letters patent of the United States, No. 41,806, for an improvement in plows, granted to me July 30, 1864, the same to be held and enjoyed by my said assignee to the full end of the term for which said patent is granted, as fully and entirely as the same would have been held and enjoyed by me, if this assignment had not been made.

D 5c rev. (1)

Witness my hand this 10th day of June, 1871.

CHARLES CHANDLER.

NO. 4. ASSIGNMENT OF AN ENTIRE (OR UNDIVIDED) INTEREST IN PATENT AND EXTENSION THEREOF, (BY SOLE INVENTOR.)

In consideration of one thousand dollars to me paid by John J. Smith, of Hartford, Conn., I do hereby sell and assign to the said John J. Smith, all my right title and interest (or an undivided half interest) in and to the letters patent of the United States, No. 10,485, for an improvement in plows, granted to me May 16, 1865, the same to be held and enjoyed by the said John J. Smith, to the full end of the term for which said letters patent are granted, and for the term of any extension thereof, as fully and entirely as the

same would have been held and enjoyed by me, if this assignment had not been made.

5c Bev. (1) STAMP. (1)

Witness my hand this 4th day of January, 1871.

CHARLES CHANDLER.

The clause with reference to extension can have no force, except with those patents granted prior to March 2, 1861, unless the law shall be changed hereafter, which is very unlikely, or unless extended by special act of Congress.

UNDIVIDED INTERESTS.

It is very important that all persons interested in patents should understand that the owner of an undivided interest in a patent, no matter how small, may, if he choose, carry on the manufacture and sale of the patented article to any extent, without any liability to account therefor to the owner or owners of the remainder of the patent; he may; also, grant all the licenses he pleases, and put all the money he gets therefor into his pocket, and keep it there, so that, unless the assignor desire just this state of things, a proper limiting clause, in the nature of a condition, putting it beyond the power of the assignee, or assignor, so to do, should be put into the assignment. Although the writer has not, in considerable practice as patent attorney, come upon an assignment drawn by any one else, which contained such a condition, he has never found an assignor who did not insist on having it, when the matter was explained to him. The next form, which is otherwise the same in substance as its immediate predecessor, No. 4, contains such a condition, printed in small capitals, which can readily be inserted in the same place in all the other forms.

NO. 5. SAME AS NO 4, WITH CONDITION.

In consideration of one thousand dollars to me paid by John J. Smith, of Hartford, Conn., I do hereby sell and assign to the said John J. Smith, one undivided half interest in and to the letters patent of the United States, No. 10,485, for an improvement in plows, granted to me May 16, 1865, the same to be held and enjoyed by the said John J. Smith to the full end of the term for which said letters patent are granted and for the term of any extension thereof.

THIS ASSIGNMENT IS MADE UPON THE FOLLOWING EXPRESS CON-DITION, WHICH FORMS AN INTEGRAL PART OF THE SAME, TO WHICH SAID CONDITION THE ASSIGNOR ASSENTS BY THE ACT OF SIGNING THIS INSTRUMENT, AND TO WHICH THE ASSIGNEE ASSENTS BY THE ACT OF ACCEPTING THE SAME, OR DOING ANY ACT UNDER AND BY VIRTUE OF ITS AUTHORITY, TO WIT: -- NEITHER THE ASSIGNOR NOR THE ASSIGNEE MENTIONED HEREIN HAVE ANY RIGHT, POWER OR LIBERTY TO MAKE. OR VEND TO OTHERS TO BE USED, THE ARTICLE (OR "PROCESS," "MA-CHINE," "COMPOUND," WHATEVER IT MAY BE) WHICH FORMS THE SUBJECT MATTER OF SAID PATENT, WITHOUT THAT HE SHALL ACCOUNT AND PAY OVER TO THE OTHER PARTY HERETO ONE HALF OF ALL THE PROFIT DERIVED FROM SUCH MAKING, USING, OR VENDING TO OTHERS TO BE USED, NOR SHALL EITHER OF SAID PARTIES HERETO HAVE ANY POWER TO MAKE ANY ASSIGNMENT, GRANT, LICENSE OR OTHER CON-VEYANCE WHATEVER HEREUNDER, EXCEPT THAT BOTH OF SAID PAR-TIES SHALL JOIN IN THE SAME IN WRITING.

5C REV.

Witness my hand this 10th day of June, 1871.

CHARLES CHANDLER.

GRANT OF EXCLUSIVE TERRITORIAL RIGHT, (BY ASSIGNEES.)

In consideration of one thousand dollars to us paid by Wm. H. Dinsmore and James S. Sanborn, of Concord, New Hampshire, we do hereby assign, grant and convey to the said Wm, II, Dins. more and James S. Sanborn, the exclusive right to make, use and vend within the State of Wisconsin, and in no other place or places, the improvement in plows, for which letters patent of the United States, dated August 25, 1867, were granted to Lemuel II. Harvey, and by said Harvey duly assigned to us, and recorded in the Patent Office, the same to be held and enjoyed by the said William H. Dinsmore and James S. Sanborn, as full and entirely as the same would have been held and enjoyed by us, if this grant had not been made.

5c. rev. (s

Witness our hands this 19th day of June, 1871.

CHARLES CHANDLER,
HENRY H. HARRIS.

It is believed that a careful reading of the above forms will enable any fairly intelligent person to draw an assignment or grant to meet any particular case, taking the phraseology wholly from one form, or partly from one and partly from another, as the circumstances in hand dictate.

LICENSES.

A license under a patent is an oral or written permit to make, sell, or use a patented invention, conveying no interest in the patent itself, and it need not be recorded.

A license may be made by the owner of the entire, or an undivided interest in a patent, or by the owner of an exclusive territorial right. An owner of a license, which, by its terms, is assignable, can assign it to other parties at his pleasure. Licenses require a five cent revenue stamp upon each sheet or piece of paper upon which they are written. The following are forms of license:

NO. 1. LICENSE—SHOP RIGHT, (BY PATENTEE.)

In consideration of fifty dollars paid me by Hart, Holbrook, & Company, of Albany, New York, I do hereby license and em-

power said firm to manufacture at a single foundry and machine shop in said Albany, and in no other place or places, the improvement in harrows, for which letters patent of the United States No. 71,846 were granted to me November 13, 1868, and to sell the machines so manufactured throughout the United States, to the full end of the term for which said letters patent are granted.

5c. REV.

Witness my hand this 22d day of June, 1871.

NOEL HOLCOMB.

NO. 2. LICENSE—SHOP RIGHT—ASSIGNABLE AND LIMITED, (BY PATENTEES.)

In consideration of fifty dollars, we do hereby license Hiram A. Evarts, of Kingston, New York, or his assigns, to manufacture at a single foundry and machine shop, the improved seed sower, for which letters patent of the United States No. 74,560 were granted to us December 15, 1870, to the number of one hundred of such seed sowers in each calendar year, and no more, and to sell such seed sowers so made in the United States, to the full end of the term for which said letters patent are granted.

D 5c. REV.

Witness our hands this 24th day of June, 1871.

HARLOW HUGGINS,
JAMES E. JILLSON.

NO. 3. LICENSE—NOT EXCLUSIVE—WITH CONTRACT FOR ROYALTY. (Taken from Patent Office Forms.)

This agreement, made the 12th day of September, 1868, between Morrison White, party of the first part, and the Uniontown Agricultural Works, party of the second part, witnesseth that whereas letters patent of the United States for an improvement in horse rakes were granted to the party of the first part, dated October 4, 1867; and whereas the party of the second part is desirous of manufacturing horse rakes containing said patented improvement; now, therefore, the parties have agreed as follows:

İ. The party of the first part hereby licenses and empowers the party of the second part to manufacture, subject to the conditions hereinafter named, at their factory in Uniontown, Maryland, and in no other place or places, to the end of the term for which said letters patent were granted, horse rakes containing the patented improvements, and to sell the same within the United States.

II. The party of the second part agrees to make full and true returns to the party of the first part, under oath, upon the first days of July and January in each year, of all horse rakes containing the

patented improvements manufactured by them.

III. The party of the second part agrees to pay to the party of the first part five dollars, as a license fee upon every horse rake manufactured by said party of the second part, containing the patented improvements; provided that, if the said fee be paid upon the days provided herein for semi-annual returns, or within ten days thereafter, a discount of fifty per cent. shall be made from said fee for prompt payment.

IV. Upon failure of the party of the second part to make returns, or to make payment of license fees, as herein provided, for thirty days after the days herein named, the party of the first part may terminate this license by serving a written notice upon the party of the second part; but the party of the second part shall not thereby be discharged from any liability to the party of the first part, for any license fees due at the time of the service of said notice.

In witness whereof, the parties above named (the said Uniontown Agricultural Works, by its president) have hereunto set their hands this day and year first above written.



MORRISON WHITE, UNIONTOWN AGRICULTURAL WORKS, By JABEZ REYNOLDS, President.

NO. 4. LICENSE-EXCLUSIVE-WITH CONTRACT FOR ROYALTY.

This agreement, made this 10th day of June, 1871, between Henry L. Harrison, of Hartford, Connecticut, party of the first part, and the Excelsior Iron Works, a corporate body under the laws of said state, located and doing business at New Britain, in said state, party of the second part, witnesseth—

That whereas letters patent of the United States were, on the 29th day of January, 1871, granted to said party of the first part, for an improvement in store hooks, which said patented article said party of the second part is desirous to make and sell; now, therefore, the parties have agreed as follows:

I. The party of the first part hereby gives to the party of the second part, the exclusive right to manufacture and sell said patented improvements, to the end of the term of said patent, subject to the conditions hereinafter named.

II. The party of the second part agrees to make full and true returns, on the first days of January. April, July and October in each year, of all of said patented stove hooks made by them in the three calendar months then last past, and if said party of the first part shall not be satisfied, in any respect, with any such return, then he shall have the right, either by himself or his attorney, to examine any and all of the books of account of said party of the second part, containing any items, charges, memoranda or information relating to the manufacture or sale of said patented stove hooks, and upon request made, said party of the second part shall produce all such books for said examination.

III. The party of the second part agree to pay the party of the first part two cents as a license fee upon every one of said patented stove hooks made by them, the whole of said license fee for each quarterly term of three months, as hereinbefore specified to be due and payable within fifteen days after the regular return day for that quarter. And said party of the second part agrees to pay to the party of the first part at least fifty dollars, as said license fee,

upon each of said quarterly terms, even though they should not make enough of said patented *stove hooks* to amount to that sum at the regular royalty of *two cents* apiece.

IV. Upon failure of the party of the second part to make returns, or to make payment of license fees as herein provided, for thirty days after such returns or such payments are due respectively, then the party of the first part may terminate this license by serving a written notice to that effect upon the party of the second part; but said party of the second part shall not thereby be discharged from any liability to the party of the first part for any license fees due at the time of the service of said notice.

In witness whereof the above named parties (the said Excelsior Iron Works, by its President) have hereto set their hands this day and year first above written.



HENRY L. HARRISON, Excelsior Iron Works, By JOHN HARTSHORN, President.

It will be observed that under form No. 3, the licensee is not bound to make a single one of the patented articles, and if he does not, the patentee derives no profit from the license. It is not an uncommon thing for unscrupulous manufacturers, with whose business a new invention would interfere, to get a license in substance like form No. 3, except to make it exclusive, and perhaps leave out the vacating clause at the end, and then to either never make a single one of the patented articles, or to make so few as to make it really amount to the same thing. The license in form No. 4 is the one that is recommended, for under it the licensee is bound to pay a certain sum, as royalty, whether he make a single one of the articles or not.

NO. 5. TRANSFER OF TRADE MARK. (From Patent Office Forms.)

We, Jotham Mills and Abner Clark, of Keokuk, Iowa, partners under the firm name of Mills & Clark, in consideration of fice hundred dollars, to us paid by Jarvis Case, of the same place, do hereby sell, assign, and transfer to the said Jarvis Case and his assigns the exclusive right to use, in the manufacture of stoves, a certain trade mark for stoves, deposited by us in the United States Patent Office, and recorded therein July 15, 1870; the same to be held, enjoyed and used by the said Jarvis Case as fully and entirely as the same would have been held and enjoyed by us, if this grant had not been made.

Witness our hands this 20th day of July, 1870.

JOTHAM MILLS, ABNER CLARK.

FORM FOR ARTICLES OF ASSOCIATION

(OF THE

WILLIAMS PATENT STEAM GOVERNOR MANUFACTURING COMPANY.)

The subscribers hereby associate themselves as a body corporate and politic, under and in pursuance of the provisions of the statute laws of the State of *Connecticut*, authorizing and regulating the formation of joint stock corporations, and they adopt the following general articles of association and agreement:

- 1. The name of the corporation shall be the Williams Patent Steam Governor Manufacturing Company, and its capital stock shall be one hundred thousand dollars, to be divided into shares of twenty-five dollars each.
- II. The purpose for which this said corporation is to be organized is to manufacture and sell the steam governor covered by letters patent of the United States, dated February 29, 1871, and numbered 102,232, issued to Chauncey Williams, to sell rights

under said letters patent, and to buy and sell, and deal generally in such real and personal estate as may be necessary and convenient in the successful prosecution of said business.

III. The principal place of business of said corporation shall be at *Hartford*, in said state.

IV. Each subscriber hereto agrees to take the number of shares in the capital stock of said corporation set against his name, to be paid for by installments, as called for by the directors hereafter to be appointed.

V. It is mutually understood and agreed by and between the subscribers hereto, that said *Chauncey Williams*, or his legal representatives, may subscribe hereto for that number of shares, whose par value amounts to twenty-five thousand dollars, and that when said letters patent are fully assigned to said corporation, said Williams, and his legal representatives, shall be freed from any further liability on account thereof, which said allowance, together with ten thousand dollars in cash, which it is agreed and understood shall be paid to said Williams before said corporation shall commence to prosecute said business, shall be in full payment for said letters patent, and the invention covered thereby, which shall then become the full and exclusive property of said corporation.

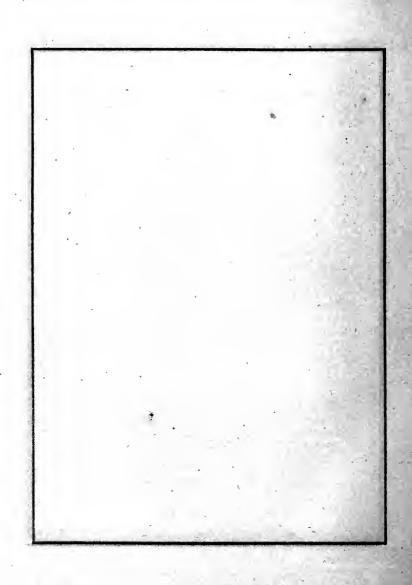
Dated Hartford, Conn., July 4th, 1871.

NAMES.

NO. OF SHARES.

PAR VALUE.

Upon such a basis as this, the inventor can proceed, till he secures the requisite subscribers, after which it is advisable to follow the advice of some local attorney, as to giving notice of the first meeting of the company, etc.



FORMS

FOR

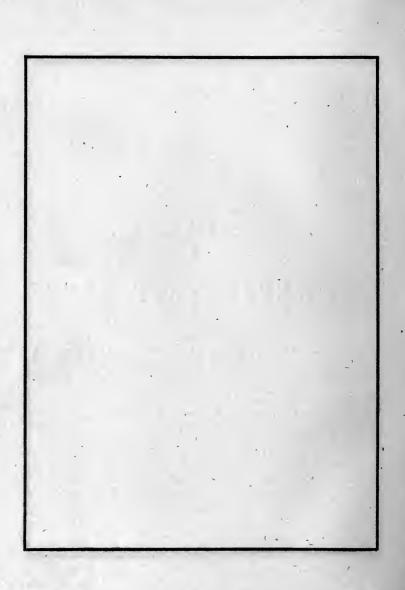
POWERS OF ATTORNEY

TO

SELL RIGHTS, ETC.

WITH

INSTRUCTIONS, ETC.



FORMS FOR POWER OF ATTORNEY.

NO. 1. POWER OF ATTORNEY.

(By the Patentee.)

I, John Haight, of Hartford, Connecticut, patentee and owner of letters patent of the United States, No. 100,001, for an improvement in Mouse Traps, dated May 10, 1870, do hereby appoint Hiram Handsome, of said Hartford, my attorney, with full power to make assignments, grants, or licenses of any kind, under said patent, with full power to sign my name to all such instruments, and to receive and receipt for all considerations received in exchange for any of said rights, but with no power to bind me in any manner further than to make binding and legal all such assignments, grants and licenses.

This power is in force till a revocation in writing shall be duly recorded upon the records of the United States Patent Office, where this power of attorney will be found duly recorded.

Witness my hand this 14th day of June, A. D. 1871.

JOHN HAIGHT.

Witnesses, Charles H. Hawser, Henry C. Cable.



It will be observed that the foregoing power gives to the attorney, while the power is unrevoked, as full power over the patent as the owner has, and makes no provision for ensuring that the owner shall know of the terms of each sale, or for the safety of the funds received. Although it is a common form, it cannot be recommended. The following is the form that is recommended:

NO. 2. POWER OF ATTORNEY, (WITH RESTRICTIONS.) (By the Assignces of entire right.)

We, William M. Noble and Hugh R. Ransom, of Hartford, Cannecticut, assignees and owners of the entire right in and to letters patent of the United States No. 100,002, for an improvement in Garden Hoes, dated May 10, 1870, do hereby appoint Harvey Handy, of said Hartford, our attorney, with full power to make assignments, grants or licenses of any kind, under said patent, with full power to sign our names to all such instruments, and to receive and receipt for, in our name, all considerations received in exchange for any of said rights, but with no power to bind us, or either of us, further than to make binding and legal all such assignments, grants, and licenses, he to exercise all power herein conferred under the following conditions, without which no act of his under this authority shall be valid.

I. He shall sell at not less than the following prices:

For the whole patent, \$20,000.

For any state, such part of \$20,000 as the population of the state in question bears ratio to the whole population of the United States, this result to be doubled to find the price for said state.

For any county, such part of the price for the state, as determined by the foregoing directions, as the population of the said county bears ratio to the population of the state, this result to be doubled to find the value of said county.

For any town, such part of the price of the county in which it is situated, determined as hereinbefore directed, as the population of the town bears ratio to the population of the county, this result to be doubled to find the value of said town.

All sales of licenses, and all territorial sales at less than the prices given above, to be subject to our approval by letter or telegram.

II. All payments for rights thus sold shall be made either in cash wholly, or in not less than one half cash, and one half in good

promissory notes, to mature within six months from day of sale, and either signed or endorsed by a person or persons of ample pecuniary responsibility. All such cash shall be deposited by the payer thereof with the nearest bank, or responsible private banker, payable to the joint order of our said attorney and ourselves, and all such promissory notes shall be made in three notes of equal amount, payable to the joint order of ourselves and our said attorney, and delivered to him. Any payment aforesaid in anywise deviating from these provisions, to be subject to our approval by letter or telegram.

This power shall remain in force till a written revocation thereof shall be recorded on the records of the Patent Office of the United States, where this power will be found recorded.

Witness our hands this 10th day of June, A. D. 1871.

Witnesses, Samuel S. Simmons, Thomas T. Tompkins. WILLIAM M. NOBLE, HUGH R. RANSOM.



The reader is, probably, not artless enough to need the suggestion that it is well to put the stated price in the power high enough to allow the agent to fall sensibly therefrom, and yet get a fair price. There is nothing that will incite a person to buy an article so much as to think he is getting it much below its real value.

NO. 3. PRIVATE AGREEMENT TO ACCOMPANY POWER OF ATTORNEY,

This agreement made this 10th day of June, 1871, between William M. Noble and Hugh R. Ransom, party of the first part, and Harvey Handy, party of the second part, all of Hartford, Ct., Witnesseth,

I. That the party of the second part agrees to use his best endeavors to sell rights under letters patent No. 100,002, dated May 10, 1871, for the party of the first part, under the terms and conditions of a power of attorney of even date herewith, from the party of the first part to the party of the second part, such endeavors to continue until said power of attorney is revoked, or until the party of the second part notifies the party of the first part, in writing, that he no longer wishes to be bound by this agreement.

II. The party of the first part agrees to pay to the party of the second part one third part of all the proceeds from said sales, as remuneration for his services in this behalf, and this remuneration shall be due and payable from cash received, as soon as deposited as provided in said power of attorney, and from promissory notes received, as soon as the same are delivered to the party of the second part, the party of the second part to retain as his property one of the three said equal promissory notes, and to immediately forward the other two to party of the first part. This allowance to be in full of all charges whatsoever, in this behalf, against party of the first part, and said party of the second part is to bear his own expenses, of whatever nature.

In witness whereof the said parties have hereto set their hands this 10th day of June, A. D. 1871.

Witnesses,
Samuel S. Simmons,
Thos. T. Tompkins.

WILLIAM M. NOBLE, HUGH R. RANSOM, HARVEY HANDY.

Both parties should have one of these agreements, which should be made in duplicate for that purpose; of course, this agreement is for nothing but private use, and is not to be shown generally.

NO. 4. REVOCATION OF POWER OF ATTORNEY.

Having, on the 10th day of June, 1871, appointed Harvey Handy, of Hartford, Conn., our attorney to sell rights under letters patent No. 100,002, dated May 10, 1871, for us, we do hereby, for full and sufficient reasons, revoke said power of attorney to him, and declare his authority to act for us in any manner to be at an end.

Witness our hands this 4th day of July, Λ . D. 1871, at Hart-ford, Conn.

Witnesses, Sam. S. Simmons, Thos. T. Tompkins.

TO THE WAY

WM. M. NOBLE, HUGH R. RANSOM.

NO. 5. POWER OF ATTORNEY TO SELL RIGHTS, C, O. D.

I, Charles Cautious, of Hartford, Conn., owner of letters patent of the United States No. 102,204, dated February 29th, 1871, hereby authorize Hiram Handy, of said Hartford, to sell assignments, grants and licenses under said patent, such sales to be approved by me before becoming valid, upon which approval in each case, I will send the necessary assignment, grant or license, duly executed by me, by express to said Handy, accompanied with instructions to the earrier to allow said Handy, and the buyer or buyers of any such right, to examine such conveyance, and upon delivery of the same, to collect for return to me such money, notes, or articles as I am to receive in consideration of such sale.

Signed and scaled by me, this 31st day of June, A. D. 1871.

CHARLES CAUTIOUS,

EVENUE STAMP.

All powers of attorney to sell rights, and all revocations thereof, should be recorded at the Patent Office, so that buyers may have full notice of a revocation, and be protected thereagainst. Notwithstanding the provision in the power of attorney that the attorney shall only sell for eash and notes, it is well to agree verbally that he may sell for real estate, subject, of course, to approval by letter or telegram, and when this is done, the deed for the same can be made to the joint names of the owner, or owners, of the patent and the attorney, and the land can afterward be divided, if not satisfactorily sold for eash, allowing the attorney one-third, as in other cases. If articles of personal property, as produce, horses, diamonds, etc., are offered in exchange for rights, it is best to take them, and then sell them for eash.

MORTGAGE OF PATENTS.

Although the patent law does not expressly provide for mortgage of patents, it plainly indicates that such mortgages can be made, for the last part of section 36, Act of July 8, 1870, reads,

"— and said assignment, grant, or conveyance shall be void, as against any subsequent purchaser or *mortgagee*, for a valuable consideration," etc., etc.

This may sometimes avail as a security whereon to borrow money, and the following is a form:

NO. 1. FORM FOR MORTGAGE OF PATENT.

In consideration of five hundred dollars, to me paid by Chauncey C. Colton, of Canton, Connecticut, I do hereby assign and mortgage to said Chauncey C. Colton, all my right, title and interest in and to a certain invention in rukes, as fully set forth and described in letters patent of the United States No. 100.003, dated

January 29, 1871, of which invention and letters patent I am sole owner.

The condition of this assignment is such that whereas, I am justly indebted to said *Colton* in the sum of *five hundred* dollars, as evidenced by my promissory note of even date herewith, payable to said *Colton*, or order, *one year* from date, with interest; now, if said note shall be well and truly paid according to its tenor, then this assignment and mortgage shall be null and void; otherwise to be of full force and effect.

In witness whereof I hereto set my hand and seal this 10th day of June, 1871.

Witnesses,

ABRAM ANDERSON,

} L. S. ₹

Barton B. Brown, Charles C. Colter.

State of Connecticut, County of Hartford, ss. Hartford, June 10th, 1871.

Then personally appeared before me, the subscribing authority, *Abram Anderson*, signer and sealer of the foregoing instrument, and acknowledged the same to be his free act and deed.



DARIUS D. DERBY, Clerk of the Superior Court for said County.

Since that an assignment of a patent needs not to be sealed, witnessed nor acknowledged, perhaps the same formalities can be dispensed with in a mortgage, but as such a mortgage can probably be foreclosed in a state court, if not put within the jurisdiction of a

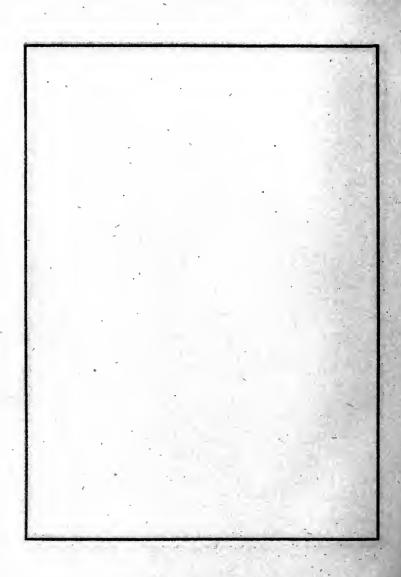
federal court, by matters extrinsic from the patent law, it is safest to make such a mortgage conform to the mortgage laws of the state within which the mortgage is executed, and the laws of most, if not all the states require that a mortgage, shall be sealed, witnessed and acknowledged. The form of witnessing and acknowledgement given-above, is the proper one for the state of Connecticut. In executing a mortgage in another state, the mortgage should conform, in these particulars, to the local law, which does not, however, vary much in the different states.

An acknowledgement before a Justice of the Peace, or a Notary Public, or other officer authorized to take acknowledgments, will be valid, but it is better to acknowledge before the Clerk of a court of record, for then his signature and seal will not generally need any further authentication for any purpose, while that of a justice, notary, or other officer, may. These mortgages require revenue stamps to the extent of fifty cents for every five hundred dollars of consideration, or fractional part thereof; thus, a mortgage for \$2,600 dollars would require \$3.00 in stamps, five fifty cent stamps for the first \$2,500, and fifty cents for \$100 in excess thereof.

HINTS UPON INVENTION,

AND

KINDRED MATTERS.



HOW TO INVENT.

It is beyond the scope of this work literally to teach how to invent; it is beyond the scope, or power, of any work to do this. No mere words can endow a brain with the subtle power of evolving from its inner self positive intellectual creations.

If this power could be imparted and conveyed by words, invention would soon cease to attract unusual attention, or to have any extraordinary money value; for, then, the science of invention would be taught in the schools, would be formulated in the books, and when an invention should be found needful, the person needing it would simply consult such books, or counsel with the professor of the science, and, *presto*, the required article would vault, full grown, upon the scene.

Invention, like poetry, sculpture and painting, is a gift, an endowment of nature, often rising to the height of genius. Like all other gifts, it can be cultivated and strengthened by exercise, till the acquired power as little resembles the original crude gift, as the oak, which has breasted a thousand storms, does the acorn from which it originally sprung.

This gift is, probably, the possession, in a greater or less degree, of all human beings of sound mind, nor does it seem to require inventive capacity of the highest order to produce important inventions. More than one invention, which has made its originator rich, famous, and all but immortal, has been the product of minds that lay no claim to kinship with genius. That quality of mind and character, which led Charles Goodyear to pursue for years, the *ignis fatuus* of hard rubber, till in a happy moment he stumbled upon the coveted secret, can hardly be called genius. Peter Cooper is well known as a successful inventor; he is not,

however, it is believed, ranked as a genius. That inventors are sometimes geniuses, it is not necessary to say. The names of such as Whitney, Ericsson and Blanchard are too familiar. Still, it is true that most men and women can become inventors of that which will net them wealth, if not fame, by the aid of ATTENTION and PERSEYERANCE.

ATTENTION, constant, careful and thoughtful attention to what is going on in the world about one, will soon enable him to discover many little gaps which it is needful to fill with an invention, some small practical improvement, it may be, which, if it can be cheaply made, and effective in operation, will fill a general want, and thus command an extensive sale.

Having thus, by the aid of attention, discovered where an invention is needed, steady Perseverance in holding the matter in mind, all the while intently striving to devise a contrivance to fill the need, will, sooner or later, result in making the desired invention. The inventor, gifted by nature with a genius for his art, has, prominent among all his other powers, that of projecting before his mind's eye, upon an invisible background of imagination, a picture bold and sharp, of the offspring of his brain. But for all this, no one need be discouraged, if he spoils scores of fair sheets of paper with his sketches, and dozens of shapely blocks of wood with his knife and gimlet, before he demonstrates to his own satisfaction, that his invention will work.

PRINCIPAL REQUISITES OF AN INVENTION.

IT MEST WORK.—Upon this point of the practical working of a new device, an inventor can hardly be too severe or critical with himself—he must not give over his efforts till he is sure, beyond a doubt, that his invention will practically supply the want for which he has designed it, irrespective of any of those little allowances that inventors are apt to make for these children of

their brain. There may be eases where an invention will be pecuniarily successful, when, though it may not work perfectly, it is yet the best thing so far found for the purpose for which it is designed. This is, obviously, a poor dependence, for it will probably be comparatively easy for some future inventor to perfect the incomplete invention, and thus destroy the first inventor's prospects.

IT MUST BE AS SIMPLE AS POSSIBLE.—There are many people, among them some inventors, who seem to think that a complicated arrangement of wheels and levers is the thing to be desired in a new invention. A greater mistake was never made; to attain the utmost simplicity is the test of genius in invention, and a prime desideratum. Simplicity in an article cheapens the cost of its production, and makes it a formidable competitor for its rivals. The difference of a cent or two in the first cost of an article often determines its success in the market.

Simplicity also tends to make an article grow in favor with those who use it; it is the more easily understood, and less liable to breakage.

SMALL INVENTIONS.

He who aspires to be ranked as a great inventor may, perhaps, best apply himself to the production of some complicate mechanism, which shall take rank beside the steam engine, the solar engine, Blanchard's lathe for irregular forms, and the like, but those who will be satisfied with money returns may safely confine themselves to small inventions, which remedy some defect in some contrivance already in use, or supply some domestic, business or agricultural want.

Good toys, well pushed, are sure to prove remunerative; the return ball is a favorite instance. Househould articles have the most extensive market of anything; immense fortunes are, obviously, being made from the fruit jars now so common. Small articles require but little capital for their manufacture and introduction, while complicate and costly machines can only be successfully handled by parties of large means.

INVENTION AS A TRADE.

No one should make invention the main business of his life, his reliance for a livelihood, till he is possessed of so much of this world's goods, that he will not suffer, if he never realizes a dollar from his inventions. Otherwise he will be very likely to speedily have his face hard down upon the grindstone, which has for ages ground the faces of the poor, but, as yet, gives no sign of diminution in the speed of its revolution, or of wearing away by attrition. Let him devote every evening in the year, if he will, to invention, and ponder upon it at every spare moment in the day, but let him not relax his industry in his regular occupation, till he is in such circumstances that it matters but little whether he ever toils. The writer has in mind, in saying this, two men whom he has known, both of them gifted with considerable power of invention, men of many admirable qualities of character, good mechanics, whose services are always in demand, and who are capable of earning, with but ordinary industry, more than enough to support themselves and their families, in ease and comfort, but who are continually at their wits' end to pay their rent, and to procure but the commonest necessaries of life; all because they will constantly neglect their regular work, to give form and substance to the creations of their brains. Not only does the course they pursue make them exceedingly uncomfortable in the mere matter of living, but it effectually deprives them of the chance of ever accumulating the small amount of funds necessary to perfect the smallest invention, and introduce it to the public notice.

CHEAP AND EFFICIENT PROTECTION.

In Mrs. Glass' Cook Book, under the head of "How to cook a Hare," the primary direction is, "First catch your hare." The inventor having caught his hare, in that he has made his invention, will next naturally proceed to cook it, that is, to realize some good from it. The first step in this direction is to secure protection, and a most advisable preliminary move is to assemble three or four intelligent and reliable friends, explain to them the model or drawing of the newly invented device, and then have them all sign a paper substantially like the following:

"Hartford, Conn., January 2d, 1871.

"John Smith has this day explained to us, so that we fully understand the same, the model (or drawing) of a Washing Machine that he claims to have invented.

JAMES JONES, CHARLES BROWN, HENRY ROBINSON."

This paper should be carefully kept, for in the future it may prove of great value in establishing the inventor's priority, in point of time, over some competitor. This proceeding will be found especially valuable, if any considerable time is allowed to elapse after the invention is made, before a patent is applied for.

The patent law allows an invention to go into public use and sale for two years before application for a patent, but it is probably never advisable to take advantage of this privilege, unless forced to it by necessity. It is better to keep the invention secret till the funds for procuring a patent can be acquired in some other way.

ABOUT SOLICITORS.

A few words about professional solicitors of patents may not be inappropriate, for it is advisable for almost all persons to avail themselves of the services of a faithful solicitor, in such securing patents.

In America, the practice of soliciting letters patent for inventions, has been, and is being largely carried on by unprofessional persons. Men who have neither paid earnest and persevering attention to the mechanic arts, nor have mastered the details of the legal profession, have deemed themselves fully competent to undertake this delicate and difficult work, which, beyond question, demands a thorough knowledge of all mechanical and chemical terms and processes in general use, a fair knowledge of the law in general, and an accurate knowledge of the patent law in particular.

This evil had become so aggravated, as to cause the Commissioner of Patents, Hon. S. S. Fisher, in his annual report for 1869, to take notice of it, as will be seen by the following

EXTRACT:

"Where establishments are organized for the purpose of procuring patents, they are apt to become more solicitous about the number than the quality of those which they obtain. This tendency

is aggravated by those who solicit patents upon contingent fees, or who, without special training or qualifications, adopt this business as an incident to a claim agency, and press for patents as they press for back pay and pensions. Such men are often more desirous of obtaining a patent of any kind, and by any means, than they are of obtaining one which shall be of any value to their clients. Inventors are often poor, uneducated, and lacking in legal knowledge. They desire a cheap solicitor, and do not know how to choose a good one. They are pleased with the parchment and the seal, and are not themselves able to judge of the scope or value of the grant, Honest and skillful solicitors, with a thorough knowledge of the practice of the office, and of patent law, and who are able and willing to advise their clients as to the exact value of the patents which they can obtain for them, may be of much service to inventors. There are many such, but those who care for nothing but to give them something called a patent, that they may secure their own fee, have in too many instances proved a curse. To get rid of their client and of trouble, they have sometimes been content to take less than he was entitled to, while in many cases they have, with much self laudation, presented him with the shadow, when the substance was beyond his reach."

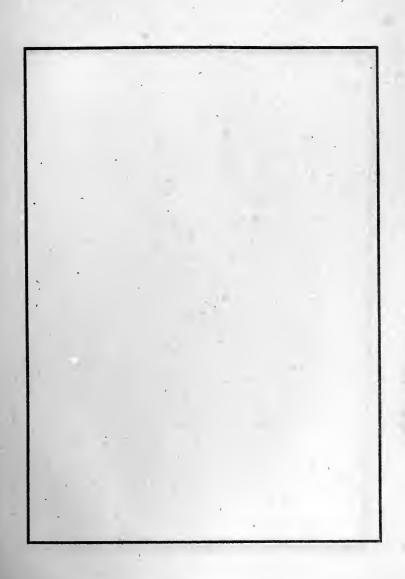
The following is from the Patent Office "Rules and Regulations" on this subject:

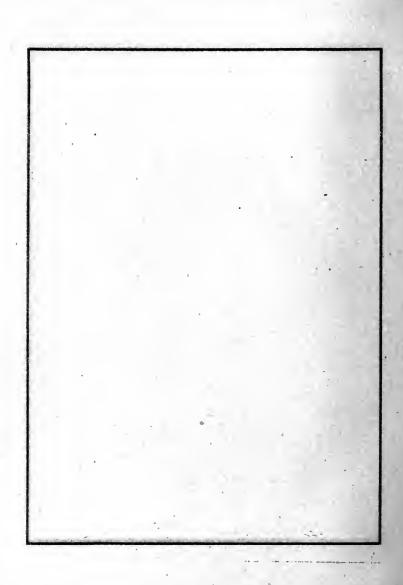
"Any person of intelligence and good moral character may appear as the attorney in fact, or agent of an applicant, upon filing a proper power of attorney. As the value of patents depends largely upon the careful preparation of the specification and claims, the assistance of competent counsel will, in most cases, be of advantage to the applicant, but the value of their services will be proportioned to their skill and honesty. So many persons have entered this profession of late years without experience, that too much care cannot be exercised in the selection of a competent man. The office cannot assume responsibility for the acts of attorneys,

nor can it assist applicants in making a selection. It will, however, be a safe rule to distrust those who boast of the possession of special and peculiar facilities in the office, for procuring patents in a shorter time, or with more extended claims than others."

From which it is very easy to draw the following

MORAL.—In selecting a solicitor, find one who has had some special training for his business, and whose integrity is to be relied upon.



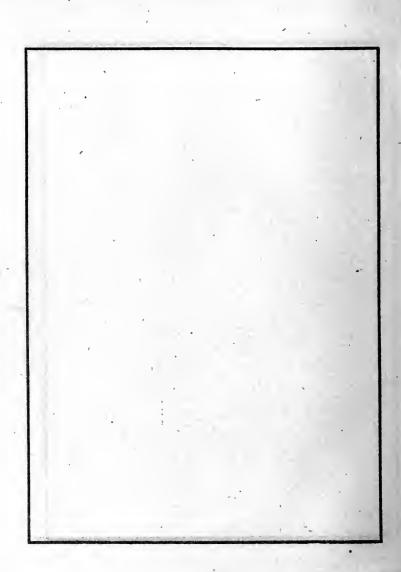


CENSUS

OF THE

UNITED STATES,

By States and Counties, 1870.



CENSUS

OF THE

United States, by Counties, for 1870.

ALAI	BAMA-Area,	50,722 squar	re miles.
Autauga	11,623 Dallas	40,705 Mar	shall 9,871
Baker	6,194 De Kalb		ile 49,311
Baldwin	6,004 Elmore		tgomery 43,704
Barbour	23,309 Escambia		gan 12,187
Bibb	7,469 Etowah		roe 14,214
Blount	9,945 Fayette		y 24,975
Bullock	24,474 Franklin	8,006 Pick	ens 17,690
Butler	14,981 Geneva	2,959 Pike	17,423
Calhoun	13,980 Greene	18,399 Ran	dolph 12,006
Chambers	17,562 Hale	21,792 Rus	sell 21,636
Cherokee	11,132 Henry	14,191 San	dford 8,893
Choetaw	12,676 Jackson	19,410 Shel	by 12,218
Clark	14,663 Jefferson	12,345 St. C	Clair 9,360
Clay	9,560 Lauderdale	15,091 Sun	nter 24,109
Cleburne	8,017 Lawrence		adega 18,064
Coffee	6,171 Lee		apoosa 16,963
Colbert	12,537 Limestone		caloosa 20,081
Conecub	9,574 Lowndes		ker 6,543
Coosa	11,945 Macon	17,727 Was	hington 3,912
Covington	4,868 Madison	31,267 Wile	eox 28,377
Crenshaw		26,151 Win	
Dale	11,325 Marion	6,059	Total996,992
ARKA	NSAS-Area.	52,198 squa	re miles.
Arkansas	8,268 Franklin	9.627 Mon	tgomery 2,984
Ashley	8,042 Fulton		ton 4,374
Benton	13,831 Grant		chita 12,975
Boone	7,032 Green		y 2,685
Bradley	8,646 Hempstead		lips 15,372
Calhoun	3,853 Hot Springs		3,788
Carroll	5,780 Independen	ce 14,566 Poir	sett 1,720
Chicot	7,214 Izard		3,376
Clark	11,953 Jackson		8,386
Columbia	11,397 Jefferson	15,733 Prai	rie 5,604
Conway	8,112 Johnson	9,152 Pula	ski 32,066
Crawford	8,957 Lafayette	9,139 Ran	dolph 7,466
Crittenden	3,831 Lawrence	5,981 St. I	Francis 6,714
Craighead	4,577 Little River	3,236 Salin	ne 3,911
Cross	3,915 Madison		t 7,483
Dallas	5,707 Marion	3,979 Sear	cy 5,614
Desha	6,125 Mississippi	3,633 Seba	stian 12,940
Drew .,	9,960 Monroe		er 4,492

Sharpe 5,400 Washington 17,266 Woodruff	6,891
Unicn 10,571 White 10,347 Yell	8,048
Van Buren 5,107 Total	484 471
, ,	
CALIFORNIA—Area, 188,981 square mil	eg.
Alameda 24,237 Marin 6,903 Santa Barbara .	7,784
Alpine 685 Mariposa 4,572 Santa Clara	
Amador 9,582 Mendocino 7,545 Santa Cruz	8,743
Butte	4,173
Calaveras 8,805 Mono	
Colusa 6,165 Monterey 9,876 Siskiyou	6,848
Contra Costa 8,461 Napa 7,163 Solano	16,871
Del Norte 2,022 Nevada 19,134 Sonoma	
El Dorado 10,309 Placer 11,357 Stanislaus	
Fresno 6,336 Plumas 4,489 Sutter	
Humboldt 6,140 Sacramento 26,830 Tehama	
Inyo 1,956 San Bernardino 3,988 Trinity	
Kern 2,925 San Diego 4,951 Tulare	
Klamath 1,686 San Francisco149,473 Tuolumne	
Lake 2,969 San Joaquin 21,050 Yolo	
Lassen	10,851
Los Angelos 15,309 San Mateo 6,635 Total	,560,247
CONNECTION Area 4 874 square mile	
CONNECTICUT—Area, 4,674 square mile	78.
Fairfield95,276 Middlesex36,099 Tolland	22,000
Hartford109,007 New Haven121,257 Windham	38,518
Litchfield48,727 New London66,570 Total	537,454
DELAWARE-Area, 2,120 square miles	
DELAWARE—Area, 2,120 square miles Kent	3. 31,696 125,015
DELAWARE—Area, 2,120 square miles Kent	3. 31,696 125,015
DELAWARE—Area, 2,120 square miles Kent	331,696125,0154.247
DELAWARE—Area, 2,120 square miles Kent	331,696 125,015 4,247 2,195
DELAWARE—Area, 2,120 square miles Mem.	331,696125,0154,2472,1953,169
DELAWARE—Area, 2,120 square miles Kent.	331,696 125,015 2,195 3,169 3,821
DELAWARE—Area, 2,120 square miles Element Color 3	
DELAWARE—Area, 2,120 square miles Kent. .29,804 New Castle .63,515 Sussex Total	3. 31,696 125,015 4,247 2,195 3,169 3,821 3,312 2,618
DELAWARE—Area, 2,120 square miles Kent	31,696
DELAWARE—Area, 2,120 square miles Kent. 29,804 New Castle .63,515 Sussex	3. 31,696 125,015 4,247 2,195 3,169 3,821 3,312 2,618 2,952 3,556
DELAWARE—Area, 2,120 square miles Kent.	31,696 125,015 247 2,195 3,169 3,821 3,312 2,618 2,952 3,556 1,453
DELAWARE—Area, 2,120 square miles Exambia 11,921 Liberty 1,050 Taylor Exambia 1,121 Liberty 1,121	3, 31,696
DELAWARE—Area, 2,120 square miles Kent. 29,804 New Castle .63,515 Sussex Total Total Total Total Square miles Alachua 17,328 Hernando 2,938 Nassau Baker 1,325 Hillsboro 3,216 Orange Bradford 3,671 Holmes 1,572 Polk Brevard 1,216 Jackson 9,528 Putnam Ocalhoun 998 Jefferson 13,398 Santa Rosa Clay 2,098 La Fayette 1,783 St. John's Columbia 7,335 Leon 15,236 Sumter Duval 11,921 Liberty 1,650 Taylor Escambia 7,817 Madison 11,121 Volusia Franklin 1,256 Manatee 1,931 Wakulla	3. 31,696
DELAWARE—Area, 2,120 square miles Kent. 29,804 New Castle 63,515 Sussex Total	3. 31,696 . 125,015 . 4,247 . 2,195 . 3,169 . 3,821 . 2,618 . 2,952 . 3,556 . 1,453 . 1,723 . 2,506 . 3,041
DELAWARE—Area, 2,120 square miles Kent. 29,804 New Castle .63,515 Sussex	3. 31,696
DELAWARE—Area, 2,120 square miles Kent. 29,804 New Castle 63,515 Sussex Total	3. 31,696
DELAWARE—Area, 2,120 square miles Kent. 29,804 New Castle .63,515 Sussex	3. 31,696
DELAWARE—Area, 2,120 square miles Kent. 29,804 New Castle .63,515 Sussex Total	3. 31,696
DELAWARE—Area, 2,120 square miles Memory M	3. 31,696 . 125,015 . 4,247 . 2,195 . 3,169 . 3,821 . 3,312 . 2,618 . 2,952 . 3,556 . 1,453 . 2,506 . 1,453 . 2,506 . 3,041 . 3,014 . 3,014
DELAWARE—Area, 2,120 square miles Kent. 29,804 New Castle .63,515 Sussex	3. 31,696
DELAWARE—Area, 2,120 square miles Rent.	3. 31,696 .125,015 .4,247 .2,195 .3,169 .3,821 .3,312 .2,618 .2,952 .3,556 .1,453 .2,566 .1,453 .2,506 .3,041 .2,302 .187,748 .5,503 .4,615 .5,503 .4,615 .5,503 .4,615 .5,903 .4,615 .5,903 .4,615 .5,903 .4,615 .5,903 .4,615 .5,903 .4,615 .5,903 .4,615 .5,903 .4,615 .5,903 .4,615 .5,903 .4,615 .5,903 .5
DELAWARE—Area, 2,120 square miles Rent 29,804 New Castle .63,515 Sussex Total Total Total Total Square miles Alachua 17,328 Hernando 2,338 Nassau Baker 1,325 Hillsboro 3,216 Orange Bradford 3,671 Holmes 1,572 Polk Brevard 1,216 Jackson 9,528 Putnam Calhoun 9998 Jefferson 13,398 Santa Rosa Clay 2,098 La Fayette 1,783 St. John's Columbia 7,335 Leon 15,236 Sumter Dade 85 Levy 2,018 Suwannee Duval 11,921 Liberty 1,050 Taylor Liberty 1,050 Taylor Tranklin 1,256 Manatee 1,931 Wakulla Gadsden 9,802 Marion 10,804 Walton Hamilton 5,749 Monroe 5,657 Washington Total GEORGIA — Area, 58,000 Square miles Appling 5,086 Bibb 21,255 Calhoun Baker 6,843 Brooks 8,342 Caunden Baldwin 10,618 Bryan 5,252 Campbell Banks 4,973 Bullock 5,610 Carroll	3. 31,696
DELAWARE—Area, 2,120 square miles Kent. 29,804 New Castle .63,515 Sussex Total	3. 31,696
DELAWARE—Area, 2,120 square miles Rent 29,804 New Castle .63,515 Sussex Total Total Total Total Square miles Alachua 17,328 Hernando 2,338 Nassau Baker 1,325 Hillsboro 3,216 Orange Bradford 3,671 Holmes 1,572 Polk Brevard 1,216 Jackson 9,528 Putnam Calhoun 9998 Jefferson 13,398 Santa Rosa Clay 2,098 La Fayette 1,783 St. John's Columbia 7,335 Leon 15,236 Sumter Dade 85 Levy 2,018 Suwannee Duval 11,921 Liberty 1,050 Taylor Liberty 1,050 Taylor Tranklin 1,256 Manatee 1,931 Wakulla Gadsden 9,802 Marion 10,804 Walton Hamilton 5,749 Monroe 5,657 Washington Total GEORGIA — Area, 58,000 Square miles Appling 5,086 Bibb 21,255 Calhoun Baker 6,843 Brooks 8,342 Caunden Baldwin 10,618 Bryan 5,252 Campbell Banks 4,973 Bullock 5,610 Carroll	3. 31,696

Chatham	41.279	Hall	9,607	Pike	10.905
Chattahoochee		Hancock	11.317	Polk	7,822
Chattooga		Haralson		Pulaski	
Cherokee		Harris		Putnam	
Clarke		Hart		Quitman	4,150
Clay		Heard		Rabun	3,256
		Heury		Randolph	
Clayton		Houston			
Clinch				Richmond	
		Irwin		Schley	5,129
Coffee		Jackson		Scriven	9,175
Colquitt		Jasper	10,409	Spalding	10,205
Columbia		Jefferson	12,150	Stewart	
Coweta		Johnson	2,964	Sumter	16,559
Crawford		Jones	9,436	Tall ot	11,913
Dade		Laureus	7,834	Taliaterro	4,796
Dawson		Lce	9,567	Tatnall	4,860
Decatur		Liberty		Taylor	7,143
De Kalb	10,014	Lincoln	5,413	Telfair	3,245
Dooly	9,790	Lowndes	8,321	Terrell	9,053
Dougherty	11,517	Lumpkin	5,161	Thomas	14,523
Early	6,998	Macon	11,458	Tewns	2,780
Echols		Madison	5,227	Troup	17,632
Effingham		Marion		Twigga	8,545
Elbert		McIntosh		Union	5,267
Emanuel		Meriwether		Upson	9,430
Fannin		Miller		Walker	9,925
Fayette		Milton		Walton	11,038
Floyd		Mitchell		Ware	2,286
Forsyth		Monroe		Warren	10,545
Franklin	7,893	Montgomery		Washington	15,842
Fulton	33,446	Morgan		Wayue	
Gilmer		Murray		Webster	4,677
	9.796	Muscogee		White	
Glascock		Newton		Whitfield	4,606 10,117
Glynn		Oglethorpe		Wilcox	
Gordon			7 600	Wilkes	2,439
Greene		Paulding	5 917	Wilkingon	0.000
Gwinnett:		Pickens		Wilkinson	
Habersham		Pierce		Worth	
Total		• • • • • • • • • • • • • • • • • • • •	• • • • • •		184,109
TT.T.T	MOTS	-Area, 55,40	5 90	nere miles	
	56 969	Cowles	95 99	Fulton	20 001
Adams	10.564	Cook	940 066	Gallatin	11 194
Alexander	10,304	Champford	19 000	Greene	11,104
Bond	10,102	Oumborland	10,000	Greene	14.000
Boone	12,942	D. Walls	12,223	Grundy	14,938
Brown	12,205	De Kaib	23,200	Hamilton	13,014
Bureau	32,415	De witt	14,708	Haucock	
				Hardin	
Carroll	16,705	Du Page	16,685	Henderson	12,582
Casa	11,580	Edgar	21,450	Henry	35,506
Champaign	32,737	Edwards	7,565	Iroquois	25,782
Christian	20,363	Effingham	15,653	Jackson	19,634
Clark	18,719	Fayette	19,638	Jasper	
Clay	15,875	Ford	9,103	Jefferson	
Clinton	16,285	Franklin	12,652	Jersey	15,054

Jo Daviess	27,820 McHenry 23,762 Sangamon	48 959
Johnson	11,248 McLean	17 410
Vano	39,091 Menard	10.590
Kane	39,091 Menard	10,580
Kaukakee	24,352 Mercer 18,769 Shelby	25,476
Kendall	12,399 Monroe	. 10,751
Knox	39,522 Montgomery 25,314 St. Clair	51,068
Lake	21,014 Morgan	30,608
La Salle	60,792 Moultrie 10,385 Tazewell	27,903
Lawrence	12 533 Ogle 27,492 Union	16 518
Lee	27,171 Peoria 47,540 Vermillion	30,388
	31,471 Perry 13,723 Wabash	
Logov	23.053 Piatt 10,953 Warren	
	26,481 Pike	17 500
Macon	32,726 Pope	10,750
Macoupin		
Madison	44,131 Pulaski	
	20,622 Putnam 6,280 Whitesides	27,503
Marshall	16,956 Randolph 20,859 Will	43,013
Mason	16,184 Richland 12,803 Williamson	17,329
Massac	9,581 Rock Island 29,783 Winnebago	29,301
McDonough	26,509 Saline	18,956
	Total2	539.891
		,
INDI	NA-Area, 33,809 Square miles.	
		10 550
	11,382 Hendricks 20,277 Pike	
Allen	43,494 Henry 22,986 Porter	13,942
	21,183 Howard 15,847 Posey	
Benton	5,615 Huntington 19,036 Pulaski	
Blackford	6,272 Jackson 18,974 Putnam	
Boone	22,593 Jasper 6,354 Randolph	22,862
Brown	8,681 Jay 15,000 Ripley	20,977
Carroll	16,152 Jefferson 29,741 Rush	17,626
Cass	24,193 Jennings 16,218 Scott	
Clarke	24,770 Johnson 18,366 Shelby	21,892
	19,084 Knox	
	17,330 Kosciusko 23,531 Starke	
Crawford	9,851 La Grange 14,148 Steuben	12,854
	16,747 Lake	
Dearborn	24,116 La Porte 27,062 Sullivan	
Decatur	19,053 Lawrence 14,628 Switzerland	12,134
De Kalb	17,167 Madison	33,515
Delaware	19,030 Marion	11,953
Dubois	12,597 Marshall 20,211 Union	6,341
	26,026 Martin	
Favette		
Floyd	0,476 Miami	10,840
	10,476 Miami 21,052 Vermillion 21,360 Monroe 14,168 Vigo	
	3,300 Monroe 14,168 Vigo	33,594
Fountain	13,300 Monroe	33,594 21,305
Fountain	3,300 Monroe	33,594 21,305 10,204
Fountain Franklin Fulton	14,168 Vigo 16,389 Monroe 12,168 Vigo	33,594 21,305 10,204 17,653
Fountain	33,300 Monroe 14,168 Vigo 6,6,389 Montgomery 23,765 Wabash	33,594 21,305 10,204 17,653 18,495
Fountain Franklin Fulton Gibson Grant	13,300 Monroe	33,594 21,305 10,204 17,653 18,495 34,048
Fountain Franklin Fulton Gibson Grant Greene	33,300 Monroe	33,594 21,305 10,204 17,653 18,495 34,048 13,585
Fountain Franklin Fulton Gibson Grant Greene Hamilton	33,300 Monroe	33,594 21,305 10,204 17,653 18,495 34,048 13,585 10,554
Fountain Franklin Fulton Gibson Grant Greene Hamilton Hancock	13,300 Monroe	33,594 21,305 10,204 17,653 18,495 34,048 13,585 10,554 14,399
Fountain Franklin Fulton Gibson Grant Greene Hamilton Hancock	33,300 Monroe	33,594 21,305 10,204 17,653 18,495 34,048 13,585 10,554 14,399

Adair 3,982 Floyd	
Adams 4,614 Franklin.	
Allamakee 17,868 Fremont.	
Appanoose 16,456 Greene	
Audubon 1,212 Grundy	
Benton 22,454 Guthrie	
Black Hawk 21,706 Hamilton	
Boone 14,584 Hancock	
Bremer 12,528 Hardin	
Buchanan 17,034 Harrison.	
Buena Vista 1,585 Henry	
Butler 9,951 Howard	
Calhoun 1,602 Humbold	
Carroll 2,451 lda	
Cass 5,464 Iowa	
Cedar 19,731 Jackson	
Cerro Gordo 4,722 Jasper	
Cherokee 1,967 Jefferson	
Clayton 27,771 Kossuth .	
Clinton	
* Crawford 2,530 Linn	
Dallas 12,019 Louisa	
Davis 15,565 Lucas	
Decatur 12,018 Lyon	
Delaware 17,432 Madison	
Des Moines 27,256 Mahaska	
Dickinson 1,389 Marion	
Dubuque 38,969 Marshall	
Emmett 1,392 Mills	
Fayette 16,973 Mitchell	

KANSAS-Area, 78,418 square miles.

Allen 7,022 Doniphan 13,969 Lyon 8,	014
Anderson 5,220 Douglass 20,592 Marion	768
Atchison 15,507 Ellis	901
	738
Bourbon 15,076 Ford 427 Miami 11,	725
	485
	564
	225
	339
Clay	
	2
	648
	33
	127
	179
	848

Republie 1,281 Shawnee 13,131 Wallace 538 Rice 5 Smith 66 Washington 4,981 Rileey 5,105 Sumner 22 Wilson 6,694 Russell 156 Trego 166 Woodson 3,827
Saline 4,246 Wabaunsee 3,362 Wyandotte 10,015 Sedgwick 1,095 Total 364,399
KENTUCKY—Area, 37,680 square miles.
Adair
Allen 10,296 Grayson 11,580 Mercer 13,144
Anderson 5,449 Green 9,379 Metcalfe 7,934
Ballard
Barren 17,780 Hanooek 6,591 Montgomery 7,557 Bath 10,145 Hardin 15,705 Morgan 5,975
Bath
Bourbon. 14,863 Harrison. 12,993 Nelson. 14,804
Boyd 8,573 Hart 13,687 Nicholas 9,129
Boyle 9,515 Henderson 18,457 Ohio 15,561
Bracken
Breathit 5,672 Hickman 8,453 Owen 14,309
Breckenridge 13,440 Hopkins 13,827 Owsley 3,889
Bullitt
Butler 9,404 Jefferson 118,953 Perry 4,274 Caldwell 10,826 Jessamine 8,638 Pike 9,562
Callaway 9,410 John Bell 3,731 Powell 2,599
Campbell
Carroll 6,189 Kenton 36,096 Robertson 5,399
Carter
Casey
Christian 23,227 Laurel 6,016 Russell 5,809
Clark
Clay 8,297 Lee 3,058 Shelby 15,733 Clinton 6,497 Letcher 4,608 Simpson 9,573
Clinton 6,497 Letcher 4,608 Simpson 9,373 Crittenden 9,381 Lewis 9,115 Spencer 5,956
Cumberland 7,690 Lincoln
Daviess 20,714 Livingston
Edmonson 4,459 Logan 20,429 Trigg 13,686
Elliott 4,433 Lyon 6,233 Trimble 5,577
Estill
Fayeste
Fleming 13,398 Marion 12,838 Washington 12,464 Floyd 7,877 Marshall 9,455 Wayne 10,602
Franklin
Fultan 6,161 McCracken 13,988 Whitley 8,279
Gallatin 5,074 McLean 7,614 Wolfe 3,603
Garrard
Grant
LOUISIANA—Area, 41,255 square miles.
Ascension 11,577 Bossler
Assumption 13,224 Caddo
Avoyelles
Bienville 10,636 Caldwell 4,820 Claiborne 20,240

Concordia 9,977 Morehouse 9,387 St. Landry 25,553	
De Soto 14,962 Natchitoches 18,265 St. Martin 9,370	
East Baton Rouge. 17,816 Orleans	
East Feliciana 13,499 Ouachita 11,582 St. Tammany 5,586	
Franklin	
Grant 4,517 Point Coupee 12,981 Tensas 12,419	
Iberia 9,042 Rapides 18,015 Terrebonne 12,441	
Iberville	
Jackson 7,646 Sabine 6,456 Vermillion 4,528	
Jefferson 17,767 St. Bernard 3,553 Washington 3,330	
Lafayette 10,388 St. Charles 4,857 West Baton Rouge 5,114	
Lafourche	
Livingston 4,026 St. James 10,152 Winn 5,954	
Madison 8,600 St. John the Baptist 6,762 Total	
radion 5,000 Bt. som the Daptier 5,102,	
MAINE—Area, 31,766 square miles.	
halling Titled, 01,100 Square lilles.	
Androscoggin 35,866 Knox 30,823 Sagadahoc	
Aroostook 29,609 Lincoln 25,597 Somerse t 34,611	
Cumberland 82,021 Oxford 33,488 Waldo 34,522	
Franklin 18,811 Penobscot 75,150 Washington 43,343	
Hancock 36,495 Piscataquis 14,403 York 69,174	
Keunebcc 53,203 Total	
10411	
WADNI AND Anna 11 104 more miles	
MARYLAND—Area, 11,124 square miles.	
Allegany 38,536 Dorchester 19,458 Queen 16,171	
Anne Arundel 24,457 Frederick 47,572 Saint Mary's 14,944	
Baltimore330,741 Harford	
Calvert 9,865 Howard 14,150 Talbot 16,137	
Caroline 12,101 Kent 17,102 Washington 34,712	
Carroll	
Cecil	
Charles 15,738 Total	
MASSACHUSETTS—Area, 7,800 square miles. Barnstable	
Barnstable 32.774 Franklin 32.625 Norfolk 89.443	
Berkshire 64,827 Hampden 78,409 Plymouth 65,365	
Bristol	
Dristor	
Dukcs 3,787 Middlesex .274,353 Worcester .192,716 Essex .200,843 Nantuckèt 4,123 Total .1,457,351	
Essex	
MICHIGAN—Area, 56,243 square miles.	
Alcona	
Allegan 32,105 Clare 366 Iosco 3,163	
Alpena 2,756 Clinton 22,845 Isabella 4,113	
Antaim 105 Delta 9 540 Tackers 96 047	
Antrim	
Barry	
Bay 15,900 Emmet 1,211 Kalkaska 424	
Benzie	
Berrien 35,104 Grand Traverse 4,443 Keweenaw 4,205	
Branch	
Calhoun 36,569 Hillsdale 31,684 Lapeer 21,345	
Cass	
Charlevoix 1,724 Huron 9,049 Lenawee 45,595	
Cheboygan 2,196 Ingham	
Carbon Ban 12,130 [Inguam 20,200 [Invingation 13,330	
	1

Mackinae 1,716 Montealm 13,629 Saginaw 39,097 Macomb 27,616 Muskegon 14,894 Sanilac 14,562 Manistee 6,074 Newaygo 7,294 Shiawassee 20,858 Manitou 801 Oakland 40,867 St. Clair 36,661 Marquette 15,033 Oceana 7,222 St. Joseph 26,275 Mason 3,263 Ogemaw 12 Tuscola 13,714 Mecosta 5,642 Ontonagon 2,845 Van Buren 28,829 Menominee 1,791 Oscola 2,938 Washtenaw 41,434 Midland 3,285 Oscoda 70 Wayne 119,038 Missauke 130 Ottawa 26,551 Wesford 650 Monroe 27,483 Presque Isle! 355 Total 1,184,059 Total 1,184,059 Menominee
MINNESOTA—Area, 95,274 square miles.
Aitkin
Anoka 3,940 Houston
Becker 308 Isanti 2,035 Redwood 1,829
Beltrami 80 Itasca 96 Renville 3,219
Benton
Big Stone
Blue Earth 17,302 Kandiyohi 1,760 Scott
Brown 6,396 Lac qui Parle 145 Sherburne 2,050
Carlton
Carver 11,586 Le Sucur 11,607 Stearns 14,206
Cass 380 Martin
Chippewa 1,467 McLeod 5,643 Stevens 174
Chisago 4,358 Meeker 6,090 St. Louis 4,561
Clay
Cottonwood 534 Monongalia 3,160 Traverse
Crow Wing 200 Morrison 1,681 Wabashaw 15,859 Dakota 16,312 Mower 10,447 Wadena 6
Dodge 8,598 Murray 209 Waseca 7,854 Douglass 4,239 Nicollet 8,362 Washington 11,809
Faribault 9,940 Nobles 117 Watonwan 2,426
Fillmore 24,887 Olmsted 19,793 Wilkin
Freeborn 10,578 Otter Tail 1,968 Winona 22,319
Goodhue 22,618 Pembina 64 Wright 9,457
Grant
MISSISSIPPI-Area, 47,156 square miles.
Adams
Alcorn 10,431 Copiah 20,608 Jackson 4,362
Amite 10,973 Covington 4,753 Jasper
Attala
Bolivar 9,732 Franklin 7,498 Jones 3,313
Calhoun
Carroll
Chickasaw 19,899 Hancock
Choctaw 16,988 Harrison 5,795 Lawrence 6,620
Claiborne 13,586 Hinds 30,488 Leake 8,496
Clark
Issaquena 6,887 Lincoln 10,184

Lowndes 30,502 Perry	2,694 Tippah 20,727
Madison	11,303 Tishemingo 7,350
Marion 4,211 Pontotoc	12,525 Tuniea 5,358
Marshall 29,416 Prentiss	9,348 Warren 26,769
Monroe 22,631 Rankin	12,977 Washington 14,569
Neshoba 7,439 Scott	7,847 Wayne 4,206
Newton 10,067 Simpson	5,718 Wilkinson 12,705
Noxubee 20,905 Smith	7,126 Winston 8,984
Oktibbeha 14,891 Sunflower	5,015 Yalabusha 13,254
Panola 20,754 Tallahatchie	7,852 Yazoo 17,279
	827,922
MISSOURI—Area, 67,380) square miles.
Adair	21,549 Ozark 3,363
Andrew 15,137 Grundy	10,567 Pemiscot 2,059
Atchison 8,440 Harrison	14,635 Perry 9,877
Audrain 12,307 Henry	17,401 Pettis 18,706
Barry 10,373 Hickory	
Barton 5,087 Holt	11,652 Pike 23,076
Bates 15,960 Howard	17,233 Platte 17,352
Benton	4,218 Polk 12,445
Bollinger 8,162 Iron	6,278 Pulaski 4,714
Boone	
Buchanan 35,109 Jasper	14,928 Ralls 10,510
Butler 4,298 Jefferson	15,380 Randolph 15,908
Caldwell 11,390 Johnson	24,648 Ray 18,700
Callaway 19,202 Knox	10,974 Reynolds 3,756
Camdem 6,108 Laclede	9,380 Ripley 3,175
Cape Girardeau 17,558 Lafayette	22,623 Saline
Carroll 17,446 Lawrence	13,067 Schuyler 8,820
Carter 1,455 Lewis	15,114 Scotland 10,670
Cass 19,296 Lincoln	
Cedar 9,474 Linn	15,900 Shannon 2,339
Chariton 19,136 Livingston	16,730 Shelby 10,119
	23,230 St. Charles 21,304
Clarke 13,667 Madison	5,849 St. Clare 6,742
Clay 15,564 Maries	5,916 Ste. Genevieve 8,384
	23,780 St. Francois 9,742
Cole 10,292 McDonald	5,226 St. Louis351,189
	11,557 Stoddard 8,535
Crawford 7,982 Miller	6,616 Stone 3,253
Dade 8,683 Mississippi	4,982 Sullivan 11,907
	11,375 Taney 4,407
Daviess 14,410 Monroe	17,149 Texas 9,618
De Kalb 9,858 Montgomery	
Dent 6,357 Morgan	
Douglass 3,915 New Madrid	6,357 Washington 11,719
Dunklin 5,982 Newton	12,821 Wayne 6,068
Franklin 30.098 Nodaway	14,751 Webster 10,434
Gasconade 10,093 Oregon	3,287 Worth 5,004
Gentry 11,607 Osage	10,793 Wright 5,684
NEBRASKA—Area, 75,99	5 square miles.
Adams 19 Blackbird	31 Buffalo 193

Burt	2,847	Jackson	. 9	Sarpy	2,913
Butler	1,290	Jefferson	. 2,440	Saunders	4,547
Cass		Johnson		Seward	2,953
Cedar		Kearney	. 58	Stanton	636
Cheyenne	190	Lancaster	. 7,074	Taylor	97
Clay		L'Eau qui Court		Washington	4,452
Colfax	1,424	Lincoln	. 17	Wayne	182
Cuming		Lyon		Webster	16
Dakota		Madison		York	604
Dawson		Merrick			
Dixon		Monroe		west Teerritory	52
Dodge	4,212	Nemaha	. 7,593	Unorganized Terri-	
Douglass		Nuckolls		tory west of Mad-	
Fillmore		Otoe		ison County	183
Franklin		Pawnee			
Gage		Pierce		Reservation	31
Grant		Platte		Pawnee Indian res-	
Hall		Polk		ervation	44
Hamilton		Richardson			00.000
Harrison	631	Saline	3,106	Total1	22,993
377777 4	-				
NEVA	DA-	-Area, 112,0	yu sq	uare miles.	
Churchill	196	Lander	. 2.815	Roop	133
Douglas		Lincoln		Storey	
Elko		Lyon		Washoe	
Esmeralda		Nye		White Pine	7,189
Humboldt		Ormsby		Total	
NEW HA	MPS	HIRE—Area,	9,28	0 square miles	
		,	,	-	
Belknap	17,681	Grafton	39,103	Rockingham	47,297
Belknap	17,681 17,332	Grafton	39,103 64,238	Rockingham	47,297 30,243
Belknap	17,681 17,332 27,265	Grafton Hillsborough Merrimack	39,103 64,238 42,151	Rockingham Strafford Sullivan	47,297 30,243 18,058
Belknap	17,681 17,332 27,265 14,932	Grafton	39,103 64,238 42,151	Rockingham	47,297 30,243 18,058
Belknap	17,681 17,332 27,265 14,932	Grafton	39,103 64,238 42,151	Rockingham	47,297 30,243 18,058
Belknap	17,681 17,332 27,265 14,932 ERS	Grafton	39,103 64,238 42,151	Rockingham	47,297 30,243 18,058 18,300
Belknap	17,681 17,332 27,265 14,932 ERSI 14,093	Grafton	39,103 64,238 42,151 320 21,562	Rockingham Strafford Sullivan 3. square miles.	47,297 30,243 18,058 18,300
Belknap	17,681 17,332 27,265 14,932 ERS 14,093 30,122	Grafton. Hillsborough Merrimack Total. EY—Area, 3,6 Gloucester Hudson.	39,103 64,238 42,151 320 21,562 129,067	Rockingham Strafford Sullivan 3. square miles. Ocean Passaic	47,297 30,243 18,058 18,300 13,628 46,416
Belknap Carroll Cheshire Coos NEW J Atlantic Bergen Burlington	17,681 17,332 27,265 14,932 ERSI 14,093 30,122 53,639	Grafton	39,103 64,238 42,151 320 21,562 129,067 36,963	Rockingham	47,297 30,243 18,058 18,300 13,628 46,416 23,940
Belknap	17,681 17,332 27,265 14,932 ERS 14,093 30,122 53,639 46,193	Grafton Hillsborough Merrimack Total EY—Area, 3, Gloucester Hudson Hunterdon Mercer	39,103 64,238 42,151 320 21,562 129,067 36,963 46,386	Rockingbam Strafford Sullivan 3. square miles. Ocean Passaic Salem Somerset 5.	47,297 30,243 18,058 18,300 13,628 46,416 23,940 23,510
Belknap	17,681 17,332 27,265 14,932 ERSI 14,093 30,122 53,639 46,193 8,349	Grafton Hillsborough Merrimack Total. EY—Area, 3, Gloucester Hudson Hunterdon Mercer Middlesex	39,103 64,238 42,151 320 21,562 129,067 36,963 46,386 45,029	Rockingbam Strafford Sullivan 3. square miles. Ocean Passaic Salem Somerset Sussex Su	47,297 30,243 18,058 18,300 13,628 46,416 23,940 23,510 23,168
Belknap	17,681 17,332 27,265 14,932 ERSI 14,093 30,122 53,639 46,193 8,349 34,665	Grafton Hillsborough Merrimack Total. EY—Area, 3, Gloucester Hudson Hunterdon Mercer Middlesex Monmouth	39,103 64,238 42,151 320 21,562 129,067 36,963 46,386 45,029 46,195	Rockingbam Strafford Sullivan 3. square miles. Ocean Passaic Salem Somerset Sussex Union	47,297 30,243 18,058 18,300 13,628 46,416 23,940 23,510 23,168 11,859
Belknap Carroll Cheshire Coos. NEW J Atlantic Bergen Burlington Camden Camden Came May Cumberland Essex J	17,681 17,332 27,265 14,932 ERSI 14,093 30,122 53,639 46,193 8,349 34,665 43,839	Grafton Hilsborough Merrimack Total. EY—Area, 3, Gloucester Hudson Hunterdon Mercer Middlesex Monmouth Morris.	39,103 64,238 42,151 320 21,562 129,067 36,963 46,386 45,029 46,195 43,137	Rockingbam Strafford Sullivan 3 square miles. Ocean Passaic Salem Somerset Sussex Union Warren	47,297 30,243 18,058 18,300 13,628 46,416 23,416 23,510 23,168 11,859 34,336
Belknap Carroll Cheshire Coos. NEW J Atlantic Bergen Burlington Camden Cape May Cumberland Essex 1	17,681 17,332 27,265 14,932 ERSI 14,093 30,122 53,639 46,193 8,849 34,665 43,839 cotal	Grafton Hillsborough Merrimack Total. EY—Area, 3, Gloucester Hudson Hunterdon Mercer Middlesex Monmouth Morris.	39,103 64,238 42,151 320 , 21,562 129,067 36,963 46,386 45,029 46,195 43,137	Rockingbam Strafford Sullivan 3 square miles. Ocean Passaic Salem Somerset Sussex Union Warren 99	47,297 30,243 18,058 18,300 13,628 46,416 23,416 23,510 23,168 11,859 34,336
Belknap Carroll Cheshire Coos NEW J Atlantic Bergen Burlington Camden Cape May Cumberland Essex 1	17,681 17,332 27,265 14,932 ERSI 14,093 30,122 53,639 46,193 8,849 34,665 43,839 cotal	Grafton Hillsborough Merrimack Total. EY—Area, 3, Gloucester Hudson Hunterdon Mercer Middlesex Monmouth Morris.	39,103 64,238 42,151 320 , 21,562 129,067 36,963 46,386 45,029 46,195 43,137	Rockingbam Strafford Sullivan 3 square miles. Ocean Passaic Salem Somerset Sussex Union Warren 99	47,297 30,243 18,058 18,300 13,628 46,416 23,416 23,510 23,168 11,859 34,336
Belknap Carroll Cheshire Coos NEW J Atlantic Bergen Burlington Camden Cape May Cumberland Essex J NEW Y	17,681 17,332 27,265 14,932 ERSJ 14,093 30,122 53,639 46,193 8,349 34,665 43,839 cotal	Grafton Hillsborough Merrimack Total. EY—Area, 3, Gloucester Hudson Hunterdon Mercer Middlesex Monmouth Morris. —Area, 47,00	39,103 64,238 42,151 320 21,562 129,067 36,963 46,386 45,029 46,195 43,137	Rockingbam Strafford Sullivan 3. square miles. Ocean Passaic Salem Somerset Sussex Union Warren 99 uare miles.	47,297 30,243 18,058 18,300 13,628 46,416 23,940 23,510 23,168 11,859 34,336 36,096
Belknap Garroll Carroll Cheshire Coos NEW J Atlantic Bergen Burlington Camden Cape May Cumberland Essex J Y Albany J Albany 1	17,681 17,332 27,265 14,932 ERSI 14,093 30,122 53,639 46,193 8,349 34,665 43,839 votal ORK	Grafton Hillsborough Merrimack Total. EY—Area, 3, Gloucester Hudson Hudson Mercer Middlesex Monmouth Morris —Area, 47,00 Clinton	39,103 64,238 42,151 320 21,562 129,067 36,963 46,366 45,029 46,195 43,137 00 sq 47,947	Rockingbam Strafford Sullivan 3. square miles. Ocean Passaic Salem Somerset Sunsex Union Warren 9 uare miles.	47,297 30,243 18,058 18,300 13,628 46,416 23,940 23,510 23,168 11,859 34,336 06,096
Belknap Carroll Cheshire Coos NEW J Atlantic Bergen Burlington Camden Cape May Cumberland Essex J WEW Albany Albany Allegany	17,681 17,332 27,265 14,932 ERSI 14,093 30,122 53,639 46,193 8,349 34,665 44,3,839 ottal ORK.	Grafton Hilsborough Merrimack Total. EY—Area, 3, Gloucester Hudson Hunterdon Mercer Middlesex Monmouth Morris —Area, 47,00 Clinton Columbia	39,103 64,238 42,151 320 , 21,562 129,063 36,963 46,386 45,029 46,195 43,137 00 sq 47,947 47,044	Rockingbam Strafford Sullivan 3 square miles. Ocean Passaic Salem Somerset Sussex Union Warren 9 uare miles. Fulton Genesse.	47,297 30,243 18,058 18,300 13,628 46,416 23,940 23,510 23,168 11,859 11,859 6,096 27,064 11,606
Belknap Carroll Cheshire Coos. NEW J Atlantic Bergen Burlington Camden Cape May Cumberland Essex	17,681 17,332 27,265 14,932 ERSJ 14,093 30,122 53,639 46,193 8,349 34,665 443,839 otal ORK 40,814 44,103	Grafton Hillsborough Merrimack Total. EY—Area, 3, Gloucester Hudson Hunterdon Mercer Middlesex Monmouth Morris. —Area, 47,00 Clinton Columbia Cortland.	39,103 64,238 42,151 320 121,562 129,067 36,963 46,386 45,029 46,195 43,137 00 sq 47,947 47,044 25,173	Rockingbam Strafford Sullivan 3. square miles. Ocean Passaic Salem Somerset Sulssex Union Warren 90 uare miles. Fulton Genesee Greene	47,297 30,243 18,058 18,300 13,628 46,416 23,940 23,510 23,168 11,859 34,336 06,096 27,064 31,606 31,632
Belknap Carroll Cheshire Coos NEW J Atlantic Bergen Burlington Camden Cape May Cumberland Essex J NEW Albany Albany Broome Cattaraugus	17,681 17,332 27,265 14,932 ERS1 14,093 30,122 53,639 46,193 8,349 34,665 43,839 otal ORK- 33,052 40,814 44,103 44,103	Grafton Hilsborough Merrimack Total. EY—Area, 3, Gloucester Hudson Hunterdon Mercer Middlesex Monmouth Morris —Area, 47,00 Clinton Columbia Cortland Delaware	39,103 64,238 42,151 320 21,562 36,963 46,386 45,029 46,195 43,137 00 sq 47,947 47,044 25,173	Rockingbam Strafford Sullivan 3 square miles. Ocean Passaic Salem Somerset Sussex Union Warren 9 ware miles. Fulton Genesee Greene Hamilton	47,297 30,243 18,058 18,300 13,628 46,416 23,940 23,510 23,168 11,859 34,336 96,096 27,064 11,606 11,632 2,960
Belknap Carroll Cheshire Coos. NEW J Atlantic Bergen Burlington Camden Cape May Cumberland Essex NEW Y Albany Albany Allegany Broome Cattaraugus Cayuga	17,681 17,332 27,262 14,932 14,932 14,933 30,122 53,639 46,193 8,349 34,665 143,839 'otal 00RK- 33,052 40,814 44,103 43,909 59,550	Grafton Hillsborough Merrimack Total. EY—Area, 3, Gloucester Hudson. Hunterdon Mercer Middlesex Monmouth Morris. —Area, 47,00 Clinton Columbia Cortland. Delaware Dutchess	39,103 64,238 42,151 320 21,562 129,067 36,963 46,386 45,099 46,195 43,137 00 sq 47,947 47,044 25,173 42,972 74,041	Rockingbam Strafford Sullivan 3. square miles. Ocean Passaic Salem Somerset Sussex Union Warren 90 uare miles. Fulton Genesee. Greene Hamilton Herkimer	47,297 30,243 18,058 18,058 18,500 13,628 46,416 23,940 23,510 23,168 11,859 34,336 66,096 27,064 11,606 11,832 2,960 89,929
Belknap Carroll Cheshire Coos NEW J Atlantic Bergen Burlington Cameden Cape May Cumberland Essex J Y NEW Y Albany 1 Allegany Broome Cataraugus Cayuga Chautauqua	17,681 17,332 27,265 14,932 14,932 30,122 53,639 46,193 8,349 34,665 43,839 otal ORK 33,052 40,814 40,814 44,103 43,909 59,550 59,327	Grafton Hillsborough Merrimack Total. EY—Area, 3, Gloucester Hudson Hunterdon Mercer Middlesex Monmouth Morris —Area, 47,00 Clinton Columbia Cortland Delaware Dutchess Erie	39,103 64,238 42,151 320 21,562 129,667 36,963 46,363 46,363 445,029 447,044 43,137 43,137 42,972 74,041 178,609	Rockingbam Strafford Sullivan 3. square miles. Ocean Passaic Salem Somerset Sunsex Union Warren 9 uare miles. Fulton Genesee Greene Hamilton Herkimer Jefferson Greffore	47,297 30,243 18,058 18,300 13,628 46,416 23,940 23,540 23,168 11,859 11,859 27,064 11,606 11,606 11,606 11,832 2,960 39,929
Belknap Carroll Cheshire Coos. NEW J Atlantic Bergen Burlington Camden Cape May Cumberland Essex J NEW Y Albany Albany Broome Cattaraugus Cayuga Chautauqua Chemung	17,681 17,332 27,265 27,265 14,932 14,932 14,033 30,122 53,639 46,193 8,349 34,665 44,883 00RK 33,052 40,814 44,103 43,909 59,550 59,327 35,281	Grafton Hillsborough Merrimack Total. EY—Area, 3, Gloucester Hudson Hunterdon Mercer Middlesex Monmouth Morris. —Area, 47,00 Clinton Columbia Cortland Delaware Dutchess Erie Essex	39,103 64,238 42,151 320 21,562 129,067 36,963 46,386 45,029 46,195 43,137 00 sq 47,947 47,044 25,173 42,972 74,041 178,699 29,042	Rockingbam Strafford Sullivan 3 square miles. Ocean Passaic Salem Somerset Sussex Union Warren 99 uare miles. Fulton Genesee Greene Hamilton Herkimer Jefferson (Kings, 44)	47,297 30,243 18,058 18,058 18,628 46,416 23,940 23,168 11,859 34,336 06,096 27,064 11,606 81,1832 2,960 83,929 55,415
Belknap Carroll Cheshire Coos NEW J Atlantic Bergen Burlington Cameden Cape May Cumberland Essex J Y NEW Y Albany 1 Allegany Broome Cataraugus Cayuga Chautauqua	17,681 17,332 27,265 27,265 14,932 14,932 14,033 30,122 53,639 46,193 8,349 34,665 44,883 00RK 33,052 40,814 44,103 43,909 59,550 59,327 35,281	Grafton Hillsborough Merrimack Total. EY—Area, 3, Gloucester Hudson Hunterdon Mercer Middlesex Monmouth Morris. —Area, 47,00 Clinton Columbia Cortland Delaware Dutchess Erie Essex	39,103 64,238 42,151 320 21,562 129,067 36,963 46,386 45,029 46,195 43,137 00 sq 47,947 47,044 25,173 42,972 74,041 178,699 29,042	Rockingbam Strafford Sullivan 3 square miles. Ocean Passaic Salem Somerset Sussex Union Warren 99 uare miles. Fulton Genesee Greene Hamilton Herkimer Jefferson (Kings, 44)	47,297 30,243 18,058 18,360 13,628 46,416 23,940 23,540 23,168 11,859 11,859 27,064 11,606 11,606 11,606 11,832 2,960 39,929 35,5415

Livingston 38,309 Otsego 48,967 St. Lawrence 84,826	
Madison	
Monroe	
Montgomery 34,457 Rensselaer 99,549 Tioga 30,572	
New York	
New YORK 542,232 Reminded 55,023 Tompkins 53,178	
Niagara 50,437 Rockland 25,213 Ulster 84,075	
Oneida	
Onondaga	
Ontario	
Orange	
Orleans 27,689 Seneca	
Oswego 77,941 Steuben 67,717 Yates	
Total	
NOTIFIE CAROLINA Anna 50 704 minus	
NORTH CAROLINA—Area, 50,704 square miles.	
Alamance 11,874 Edgecombe 22,970 Northampton 14,749	
Alexander 6,868 Forsyth	
Alleghany 3,691 Franklin 14,134 Orange	
Anson	
Ashe	
Beaufort	
Bertie	
Bladen	
Brunswick	
Buncombe 15,412 Harnnett 8,895 Richmond 12,882	
Burke 9,777 Haywood 7,921 Robeson 16,262	
Cabarrus 11,954 Henderson 7,706 Rockingham 15,708	
Caldwell	
Camden	
Carteret 9,010 Iredell 16,931 Sampson 16,436	
Caswell 16,081 Jackson 6,683 Stanley	
Chowan 6,450 Lincoln 9,573 Tyrrell 4,173 Clay 2,461 Macon 6,615 Union 12,217	
Cleaveland	
Columbus 8,474 Martin 9,647 Warren 17,768	
Craven 20,516 McDowell 7,592 Washington 6,516	
Cumberland 17,035 Mecklenburg 24,299 Watauga 5,287	
Currituck 5,131 Mitchell 4,705 Wayne 18,144	
Dare	
Davidson	
Davie	
Duplin 15,542 New Hanover 27,978 Yancy 5,909	
Total	
OHIO—Area, 39,964 square miles	
1 James 20, 200 Square miles	
Adams	
Allen	
Ashland 21,933 Carroll 14,491 Crawford 25,556	
Ashtabula 32,517 Champaign 24,188 Cuyahoga 132,010	
Atheus	
Anglaize 20,041 Clermont 34,268 Defiance 15,719	
Belmont	

Erie	28.188	Licking	35,756	Portage 24,584	
Fairfield			23.028	Preble 21,809	
Fayette	17 170			Putnam 17,081	
Franklin	63 019	Lucas		Richland 32,516	
Fulton	17 799	Madison	15 633	Ross	
Gallia	05 545	Mahoning	21 001	Conductor of too	
Counce	14 100	Manioning	10 101	Sandusky 25,503	
Geanga	14,190	Marion		Scioto 29,302	
Greene	28,038	Medina	20,092	Seneca 30,827	
Guernsey	23,838	Meigs	31,465	Shelby 20,748	
Hamilton2	60,370	Mercer	17,254	Stark 52,508	
Haucock	23,847	Miami	32,740	Summit 34,674	
Hardin	18,714	Monroe	25,779	Trumbull 38,659	
Harrison	18,682	Montgomery	64,006	Tuscarawas 53,840	
Henry	14,028	Morgan	20,363	Union 18,730	
Highland	29,133	Morrow	18,583	Van Wert 15,823	
Hocking	17,925	Muskingum		Vinton 15,027	
Holmes	18,177	Noble	19 949	Warren 26,689	
Huron	28 532	Ottowa	19 964	Washington 40,609	
Tackgon	21 750	Doulding	9 544	Wayne 35,116	
To Concer	00 100	Downs	10 459	Williams 20,991	
Jenerson	06 999	Dislance	10,400	Williams 20,991	
Knox	20,000	Pickaway	24,010	Wood 24,596	
Lake	10,900	Pike	10,447	Wyandot 18,553	
Lawrence	31,380	Total		2,665,260	
OPEGO	TKC	A 200 100 80	Q ~~	nome miles	
	714	Area, 102,60	U sq	uare miles.	
Baker		Grant	2,251	Polk 4,701	
Benton		Jackson	4,778	Tillamook 408	
Clackamas		Josephine		Umatilla 2,916	
Clatsop		Lane	6,426	Union 2,552	
Columbia	863	Linn	8,717	Wasco 2,509	
Coos	1,644	Marion	9,965	Washington 4,261	
Curry	504	Multnomah	11,510	Yam Hill 5,012	
Douglas	6,066	Total		90,923	
				,	
PENNSYL	VAJ	NIA—Area, 46	3,000	o square miles.	
Adams	30.315	Cumberland	43.912	McKean 8.825	
Alleghany26	62,204	Dauphin	60,740	Mercer 49,977	
Armstrong	43,382	Delaware	39,403	Miffin 17,508	
Beaver					
Bedford	29,635	Erie	65,973	Montgomery 81,612	
				Montour 15,344	
Blair				Northampton 61,432	
Drodford	53 204	Franklin	45 965	Northumberland 41,444	
Bucks				Perry 25,447	
Dudley	26 510	Greene	05 007	Philadelphia 674,022	
Butler	96 560	Truntingdon	21,001	Tilliadelpina	
				Pike 8,436	
Cameron	4,273	Indiana	36,138	Potter 11,265	
Carbon	28,144	Jenerson	21,656	Schuykill	
Centre	34,418	Juniata	17,390	Snyder 15,606	
Chester	77,805	Lancaster	121,340	Somerset 28,226	
				Sullivan 6,191	
Clearfield	25,741	Lebanon	34,096	Susquehanna 37,523	
Clinton	23,211	Lehigh	56,796	Tioga 35,097	
				** .	
Columbia	28,766	Luzerne	160,755	Union 15,565	
Crawford	$28,766 \\ 63,832$	Luzerne	160,755 47.626	Venango	

Warren 23,897 Wayne 33,188 Wyoming 14,585
Washington 40 409 Westwordend 50 710 Vonts 72 194
Washington 48,483 Westmoreland 58,719 York 76,134 Total 3,521,791
Total
DIFFERENCE AND Asset 1 000 servers willer
RHODE ISLAND—Area, 1,306 square miles.
Bristol
Bristol 9,421 Newport 20,050 Washington 20,097 Kent 18,595 Providence 149,190 Total 217,353
SOUTH CAROLINA—Area, 29,385 square miles.
Abbeville 31,129 Fairfield 19,888 Newberry 20,775
Anderson 24,049 Georgetown 16,161 Oconee 10,536
Barnwell
Beaufort
Beautort
Charleston 88,863 Kershaw
Chester 18,805 Lancaster 12,087 Spartanburg 25,784
Chesterfield 10,584 Laurens
Clarendon 14,038 Lexington 12,988 Union 19,248
Colleton 25,410 Marion
Darlington 26,243 Marlborough 11,814 York 24,286
Edgefield
TENNESSEE—Area, 45,600 square miles.
Anderson 8,704 Hancock 7,148 Morgan
Bedford
Benton
Bledsoe
Blount 14,237 Haywood
Bradley
Claiborne
Cocke
Coffee 10,237 Lake 2,428 Shelby 76,378
Cumberland 3,461 Lauderdale 10,838 Smith 15,994
Davidson 62,897 Lawrence 7,601 Stewart 12,019
Davidson 62,897 Lawrence 7,601 Stewart 12,019 Decatur 7,772 Lewis 1,986 Sullivan 13,136
Davidson 62,897 Lawrence 7,601 Stewart 12,019 Decatur 7,772 Lewis 1,986 Sullivan 13,136 De Kalb 11,425 Lincoln 28,050 Sumner 23,711
Davidson 62,897 Lawrence 7,601 Stewart 12,019 Decatur 7,772 Lewis 1,986 Sullivan 13,136
Davidson 62,887 Lawrence 7,601 Stewart 12,019 Decatur 7,772 Lewis 1,986 Sulliyan 13,136 De Kalb 11,425 Lincoln 28,050 Summer 23,711 Dickson 9,340 Macon 6,633 Tipton 14,884 Dyer 13,766 Madison 23,480 Union 7,605
Davidson 62,887 Lawrence 7,601 Stewart 12,019 Decatur 7,772 Lewis 1,986 Sullivan 13,136 De Kalb 11,425 Lincoln 28,050 Sumner 23,711 Dickson 9,340 Macon 6,633 Tipton 14,884 Dyer 13,766 Madison 23,480 Union 7,605
Davidson 62,897 Lawrence 7,601 Stewart 12,019 Decatur 7,772 Lewis 1,986 Sullivan 13,136 De Kalb 11,425 Lincoln 28,050 Summer 23,711 Dickson 9,340 Macon 6,633 Tipton 14,884 Dyer 13,706 Madison 23,480 Union 7,605 Fayette 26,145 Marion 6,841 Van Buren 2,725
Davidson 62,897 Lawrence 7,601 Stewart 12,019 Decatur 7,772 Lewis 1,986 Sullivan 13,136 De Kalb 11,425 Lincoln 28,050 Sumner 23,711 Dickson 9,340 Macon 6,633 Tipton 14,884 Dyer 13,706 Madison 23,480 Union 7,605 Fayette 26,145 Marion 6,841 Van Buren 2,725 Fentress 4,717 Marshall 16,207 Warren 12,714
Davidson 62,897 Lawrence 7,601 Stewart 12,019 Decatur 7,772 Lewis 1,986 Sullivan 13,136 De Kalb 11,425 Lincoln 28,050 Summer 23,711 Dickson 9,340 Macon 6,633 Tipton 14,884 Dyer 13,706 Madison 23,480 Union 7,605 Fayette 26,145 Marion 6,841 Van Buren 2,725 Fentress 4,717 Marshall 16,207 Warren 12,714 Franklin 14,970 Mary 36,289 Washington 16,317
Davidson 62,897 Lawrence 7,601 Stewart 12,019 Decatur 7,772 Lewis 1,986 Sullivan 13,136 De Kalb 11,425 Lincoln 28,050 Summer 23,711 Dickson 9,340 Macon 6,633 Tipton 14,884 Dyer 13,706 Madison 23,480 Union 7,605 Fayette 26,145 Marion 6,841 Van Buren 2,725 Fentress 4,717 Marshall 16,207 Warren 12,714 Franklin 14,970 Maury 36,289 Washington 16,317 Gibson 25,666 McMinn 13,969 Wayne 10,209
Davidson 62,887 Lawrence 7,601 Stewart 12,019 Decatur 7,772 Lewis 1,986 Sullivan 13,136 De Kalb 11,425 Lincoln 28,050 Summer 23,711 Dickson 9,340 Macon 6,633 Tipton 14,884 Dyer 13,706 Madison 23,480 Union 7,605 Fayette 26,145 Marion 6,841 Van Buren 2,725 Fentress 4,717 Marshall 16,207 Warren 12,714 Franklin 14,970 Maury 36,289 Washington 16,317 Gibes 32,413 McNairy 12,726 Weakley 20,755
Davidson 62,897 Lawrence 7,601 Stewart 12,019 Decatur 7,772 Lewis 1,986 Sullivan 13,136 De Kalb 11,425 Lincoln 28,060 Summer 23,711 Dickson 9,340 Macon 6,633 Tipton 14,884 Dyer 13,706 Madison 23,480 Union 7,605 Fayette 26,145 Marion 6,841 Van Buren 2,725 Fentress 4,717 Marshall 16,207 Warren 12,714 Franklin 14,970 Maury 36,289 Washington 16,317 Gibson 25,666 McMinn 13,969 Wayne 10,209 Giles 32,413 McNairy 12,726 Weakley 20,755 Grainger 12,421 Meigs 4,511 White 9,375
Davidson 62,887 Lawrence 7,601 Stewart 12,019 Decatur 7,772 Lewis 1,986 Sullivan 13,136 De Kalb 11,425 Lincoln 28,050 Sumner 23,711 Dickson 9,340 Macon 6,633 Tipton 14,884 Dyer 13,706 Madison 23,480 Union 7,605 Fayette 26,145 Marion 6,841 Van Buren 2,725 Fentress 4,717 Marshall 16,207 Warren 12,714 Franklin 14,970 Maury 36,289 Washington 16,317 Gibes 32,413 McNairy 12,969 Wayne 10,209 Giles 32,413 McNairy 12,726 Weakley 20,755 Grainger 12,668 Monroe 12,589 Williamson 25,328
Davidson 62,887 Lawrence 7,601 Stewart 12,019 Decatur 7,772 Lewis 1,986 Sullivan 13,136 De Kalb 11,425 Lincoln 28,050 Summer 23,711 Dickson 9,340 Macon 6,633 Tipton 14,884 Dyer 13,706 Madison 23,480 Union 7,605 Fayette 26,145 Marion 6,841 Van Buren 2,725 Fentress 4,717 Marshall 16,207 Warren 12,714 Franklin 14,970 Maury 36,289 Warnen 12,317 Gibes 32,413 McMinn 13,969 Wayne 10,209 Giles 32,413 McNairy 12,726 Wakley 20,755 Grainger 12,421 Meigs 4,511 Williamson 25,328 Grundy 3,250 Montgomery 24,747 Williamson 25,881
Davidson 62,887 Lawrence 7,601 Stewart 12,019 Decatur 7,772 Lewis 1,986 Sullivan 13,136 De Kalb 11,425 Lincoln 28,050 Sumner 23,711 Dickson 9,340 Macon 6,633 Tipton 14,884 Dyer 13,706 Madison 23,480 Union 7,605 Fayette 26,145 Marion 6,841 Van Buren 2,725 Fentress 4,717 Marshall 16,207 Warren 12,714 Franklin 14,970 Maury 36,289 Washington 16,317 Gibes 32,413 McNairy 12,969 Wayne 10,209 Giles 32,413 McNairy 12,726 Weakley 20,755 Grainger 12,668 Monroe 12,589 Williamson 25,328
Davidson 62,897 Lawrence 7,601 Stewart 12,019 Decatur 7,772 Lewis 1,986 Sullivan 13,136 De Kalb 11,425 Lincoln 28,050 Summer 23,711 Dickson 9,340 Macon 6,633 Tipton 14,884 Dyer 13,706 Madison 23,480 Union 7,605 Fayette 26,145 Marion 6,841 Van Buren 2,725 Fentress 4,717 Marshall 16,207 Warren 12,714 Franklin 14,970 Maury 36,289 Warren 12,714 Franklin 14,970 McMinn 13,969 Wayne 10,209 Giles 32,413 McNairy 12,726 Weakley 20,755 Grainger 12,421 Meigs 4,511 White 9,375 Greene 21,668 Monroe 12,589 Williamson 25,881 Grundy 3,250 Montgomer
Davidson 62,887 Lawrence 7,601 Stewart 12,019
Davidson 62,887 Lawrence 7,601 Stewart 12,019
Davidson 62,897 Lawrence 7,601 Stewart 12,019

Bee	1.082	Grayson	14,387 Milam 8,984	
Bell		Grimes	13,218 Montague 890	
Bexar		Guadalupe	7,282 Montgomery 6,483	
Bexar District		Hamilton	733 Nacogdoches 9,614	
Blanco		Hardin	1,460 Navarro 8,879	
Bosque		Harris	17,375 Newton 2,187	
Bowie		Harrison	13,241 Nences 3,975	
Brazoria		Hays	4,088 Orange 1,255	
Brazos		Henderson	6,786 Panola 10,119	
Brown		Hidalgo	2,387 Parker 4,186	
Burleson	8,072	Hill	7,453 Polk 8,707	
Burnet	3,688	Hood	2,585 Presidio 1,636	
Caldwell	6,572	Hopkins	12,651 Red River 10,653	
Calhoun	3,443	Houston	8,147 Refugio 2,324	
Cameron		Hnnt	10,291 Robertson 9,990	
Chambers		Jack	694 Rusk 16,916	
Cherekee		Jackson	2,278 Sabine 3,256	
Coleman		Jasper		
Collin		Jefferson		
Colorado			4,923 San Saba 1,425	
		Johnson		
Comal		Karnes	1,705 Shackleford 455	
Comanche		Kaufman		
Cook		Kendall	1,536 Smith 16,532	
Coryell		Kerr		
Dallas	13,314	Kimble		
Davis	8,875	Kinney	1,204 Tarrant 5,788	
Demmit	109	Lamar		
Denton	7,251	Lampasas	1,344 Travis 13,153	
De Witt		La Salle		
Duval		Lavaca		1
Eastland		Leon		
Ellis		Liberty		
El Paso		Limestone		
Ensinal		Live Oak		
Lrath		Llano		
Falls		Madison		
Fannin		Marion		
Fayette	7,000	Mason		
Fort Bend		Matagorda		
Freestone	. X. 139	Maverick		,
Frio				
	309	McCulloch	. 173 Wise 1,450	
Galveston	309 15,290	McCulloch	. 173 Wise 1,450 13,500 Wood 6,894	ŀ
Galveston	309 15,290 3,560	McCulloch	173 Wise 1,450 13,500 Wood - 6,894 230 Young 135	,
Galveston	309 15,290 3,560 3,628	McCulloch McLennan McMullen Medina	. 173 Wise . 1,450 13,500 Wood 6,894 230 Young , 135 2,078 Zapata . 1,488	,
Galveston	309 15,296 3,566 3,628 8,951	McCulloch McLennan McMullen Medina Menard	. 173 Wise . 1,450 13,500 Wood . 6,894 . 230 Young . 135 2,078 Zapata . 1,488 . 667 Zavala . 133	3
Galveston	309 15,296 3,566 3,628 8,951	McCulloch McLennan McMullen Medina Menard	. 173 Wise . 1,450 13,500 Wood 6,894 230 Young , 135 2,078 Zapata . 1,488	3
Galveston Gillesple Goliad Gonzales	309 15,296 3,566 3,628 8,951	McCulloch McLennan McMullen Medina Menard	173 Wise 1,450 13,500 Wood 6,894 230 Young 135 2,078 Zapata 1,488 667 Zavala 1818,579	3
Galveston Gillesple Goliad Gonzales VERM	309 15,296 3,566 3,628 8,951 Toi	McCulloch McLennan McMullen Medina Menard Menard McMuran Menard McMuran Menard McMuran	173 Wise 1,450 13,500 Wood 6,894 230 Young 135 2,078 Zapata 1,488 667 Zavala 133 818,579	
Galveston Gillespie Goliad Gonzales VERI Addison	309 15,296 3,566 3,628 8,951 Tot MON 2	McCulloch McLennan McMullen Medina Medina Menard al T—Area, 10,2	173 Wise	1
Galveston Gillespie Golfad Gonzales VER Addison Bennington	309 . 15,296 . 3,566 . 3,628 . 8,951 Tot MON 2 . 23,484 . 21,325	McCulloch McLennan McMullen Meddina Meddina Menard al	173 Wise 1,450 13,500 Wood 6,899 230 Young 135 2,078 Zapata 1,488 667 Zavala 188,579 12 square miles. 30,291 Rutland 40,651 4,082 Washington 26,508	1 3
Galveston Gillesple Goliad Gonzales VER Addison Bennington Caledonia	309 15,296 3,566 3,628 8,951 To MON 2 23,484 21,325 22,247	McCulloch McLennan McMullen McMullen Medina Menard al C—Area, 10,2 Franklin Grand Isle Lamoille	173 Wise. 1,450 13,500 Wood. 6,894 230 Young. 135 2,078 Zapata. 1,488 667 Zavala. 133 818,579 12 square miles. 30,291 Rutland. 40,651 4,082 Washington. 20,508 12,448 Windham. 26,603	
Galveston Gillesple Goliad Gonzales VER Addison Bennington Caledonia	309 15,296 3,566 3,628 8,951 To MON 7 23,484 21,325 22,247 36,480	McCulloch McLennan McMullen Medina Menard al -Area, 10,2 Franklin Grand Isle Lamoille Orange	173 Wise 1,450 13,500 Wood 6,894 230 Young 135 2,078 Zapata 1,488 667 Zavala 188,579 12 square miles. 4,082 Washington 26,508 12,448 Windham 26,636 22,909 Windsor 36,606	
Galveston Gillesple Goliad Gonzales VER Addison Bennington Caledonia	309 15,296 3,566 3,628 8,951 To MON 7 23,484 21,325 22,247 36,480	McCulloch McLennan McMullen McMullen Medina Menard al C—Area, 10,2 Franklin Grand Isle Lamoille	173 Wise 1,450 13,500 Wood 6,894 230 Young 135 2,078 Zapata 1,488 667 Zavala 188,579 12 square miles. 4,082 Washington 26,508 12,448 Windham 26,636 22,909 Windsor 36,606	

VIRGINIA—Aera, 38,38	52 square miles.
Accomack 20,409 Frederick	16,596 Nottoway 9,291
Albemarle 27,544 Giles	5,875 Orange 10,396
	10,211 Page 8,462
	10,313 Patrick 10,161
Amelia 9,878 Grayson	
Amherst 14,900 Greene	4,634 Powhatan 7,667
Appomattox 8,950 Greenville	
Augusta 28,763 Halifax	27,828 Prince George 7,820
Bath 3,795 Hanover	16,455 Princess Anne 8,273
Bedford 25,327 Henrico	
Bland 4,000 Henry	12,303 Pulaski 6,538
Botetourt 11,329 Highland	4,151 Rappahannoek 8,261
Brunswick 13,427 Isle of Wight	8,320 Richmond 6,503
Buchanan 3,777 James City	4,425 Roanoke 9,350
Buckingham 13,371 King and Queen	9,709 Rockbridge 16,058
Campbell 28,384 King George	5,742 Rockingham 23,668
Caroline 15,128 King William	7,515 Russell 11,103
Carroll 9,147 Lancaster	
Charles City 4,975 Lee	
Charlotte 14,513 Loudon	. 20,929 Smyth 8,898
Chesterfield 18,470 Louisa	16,332 Southampton 12,285
Clarke 6,670 Lunenburg	
Craig 2,942 Madison	8,670 Stafford 6,420
Culpepper 12,227 Matthews	6,200 Surry 5,585
	21,318 Sussex 7,885
Dinwiddie 30,702 Middlesex	
	. 12,556 Warren 5,716
Essex 9,927 Nansemond	11,576 Warwick 1,672
	13,898 Washington 16,816
Fauquier 19,690 New Kent	4,381 Westmoreland 7,682
Floyd 9,824 Norfolk	46,702 Wise 4,785 8,046 Wythe 11,611
Fluvanna 9,875 Northampton Franklin 18,264 Northumberland	
Total	
WEST VIRGINIA—Area, 2 Barbour 10.312 Jefferson	
Berkeley 14,900 Kanawha	13,219 Pocahontas 4,067 22,349 Preston 14,555
	10,175 Putnam 7,794
	5,053 Raleigh
Brooke 5,464 Logan	
Cabell 6,429 Marion	12,107 Ritchie 9,055
Calhoun 2,939 Marshall	
Clay 2,196 Mason	
Doddridge 7,076 McDowell	
Fayette 6,647 Mereer	7,064 Tyler 7,832
Gilmer 4,338 Mineral	6,332 Upshur 8,023
Grant 4,467 Monongalia	
Greenbrier 11,417 Monroe	11,124 Webster 1,730
Hampshire 7,643 Morgan	4,315 Wetzel 8,595
Hancock 4,363 Nicholas	
Hardy 5,518 Ohio*	28,831 Wood 19,000
Harrison 16,714 Pendleton	6,455 Wyoming 3,171
Jackson, 10,300 Pleasants,	3,012 Total442,014

WISCONSIN—Area, 53,924 square miles.
W1SCUNSIN—Area, 53,924 square miles. Adams 6,601 Green 23,611 Pierce 9,958 Ashland 221 Green Lake 13,195 Polk 3,422 Barron. 598 Iowa 24,544 Portage 10,634 Bayfield 344 Jackson 7,687 Racine 26,740 Brown 25,168 Jefferson 34,040 Richland 15,731 Buffalo 11,123 Juneau 12,372 Rock 39,030 Burnett 706 Kenosha 13,147 Sauk 23,860 Calumet 12,335 Kewaumee 10,128 Shawanaw 3,160 Chippewa 8,311 La Crosse 20,297 Sheboygan 31,749 Clark 3,450 La Fayette 22,659 St. Croix 11,035 Clark 3,450 La Fayette 22,659 St. Croix 11,035 Crawford 13,075 Marathon 5,885 Vernon 18,645 Dane 53,096 Marquette 8,956 Walworth 25,972 Dodge 47,035 Milwaukee 89,330 Washington 23,919 Door
DISTRICT OF COLUMBIA—Area, 60 square miles.
Georgetown City 11,384 Washington City109,199 Remainder of Dist. 1,117 Total
TERRITORIES.
ARIZONA—Area, 113,916 square miles. Mohave 179 Yavapai 2,142 Yuma 1,621 Pima 5,716 Total 9,658
COLORADO—Area, 104,500 square miles. Arapahoe 6,829 El Paso. 987 Larimer 838 Bent. 599 Fremont 1,064 Las Animas 4,276 Boulder. 1,939 Gilpin 5,490 Park 447 Clear Creek 1,596 Greenwood 510 Pueblo 2,265 Conejos 2,504 Huerfano 2,250 Saguache 304 Costilla 1,779 Jefferson 2,392 Summit 258 Douglas 1,388 Lake 522 Weld 1,636 Total 39,864
DAKOTA-Area, 50,932 square miles.
Bon Homme

IDAHO—Area, 86,294 square miles.
Ada. 2,675 Idabo. 849 Oneida. 1,922 Alturas 689 Lemhi 988 Owyhee 1,713 Boise 3,834 Nez Perces 1,607 Shoshone 725 Total 14,999
MONTANA—Area, 143,776 square miles.
Beaver Head. 722 Deer Lodge 4,367 Madison 2,684 Big Horn 33 Gallatin 1,578 Meagher 1,387 Choteau 517 Jefferson 1,531 Missoula 2,554 Dawson 177 Lewis and Clarke 5,040 Total 20,595
NEW MEXICO—Area, 121,201 square miles.
Bernalillo. 75,591 Mora 8,056 Santa Fe. 6,603 Colfax 1,992 Rio Arriba 9,204 Socorro 6,603 Doua-Ana 5,864 San Miguel 16,058 Taos 12,079 Grant 1,143 Santa Ana 1,599 Valencia 9,093 Lincoln 1,803 Total 91,874
UTAH—Area, 84,476 square miles.
Beaver 2,007 Millard 2,753 Sevier 19 Box Elder 4,855 Morgan 1,972 Summit 2,512 Cache 8,229 Piute 82 Tooele 2,177 Davis 4,459 Rich 1,955 Utah 12,203 Iron 2,277 Rio Virgin 450 Wasatch 1,214 Juab 2,034 Salt Lake 18,337 Washington 3,034 Kane 1,513 San Pete 6,786 Weber 7,858 Total 86,786
WASHINGTON-Area, 69,994 square miles.
Chehalis 401 Klikitat 329 Stevens 734 Clallam 408 Lewis 888 Thurston 2,246 Clarke 3,981 Mason 229 Wahkiakum 270 Cowlitz 730 Pacifie 738 Walla:Walla 5,300 Island 626 Pieree 1,409 Wha*com 534 Jefferson 1,268 Skamania 133 Yakima 432 King 2,120 Snohomish 599 The Disputed Islands 554 Kitsap 866 Total 23,955
WYOMING—Area, 97,883 square miles.
Albany 2,021 Laramie 2,957 Uintah 856 Carbon 1,368 Sweetwater 1,916 Total 9,118
The total for the States is
Whole total38,555,983

ONE HUNDRED PRINCIPAL CITIES. CENSUS OF 1870.

New York, N. Y942,292	Scranton, Pa35,092	Bridgeport, Ct19,960
Philadelphia, Pa. 674,022	Reading, Pa33,930	Erie. Pa
Brooklyn, N. Y 396,099	Columbus, O33,509	Wheeling, W. Va 19.282
St. Louis, Mo 310,864	Paterson, N. J33,579	Norfolk Va 19 229
Chicago, Ill 298,977	Dayton, O30,473	Tannton Mass 18 629
Baltimore Md 267 354	Kansas City, Mo32,260	Cholyna Mass 18 547
Roston Mass 250 596	Mobile, Ala32,034	Dubugue Ia 18 494
Cincipati () 916 920	Portland, Me31,414	Language Van 17 979
Vous Orleans Ta 101 410	Wilmington Dal 90 041	Leavenworth, Kan17,615
New Orleans, La., 191,418	Wilmington, Del30,841	Fort wayne, Ind11,718
San Francisco, Car. 149,473	Lawrence, Mass28,921	Springheld, III17,364
Buffalo, N. Y117,714	Toledo, O31,584	Auburn, N. Y17,225
Washington, D. C. 109,199	Charlestown, Mass. 28,323	Newburg, N. Y17,014
Newark, N. J105,059	Lynn, Mass28,233	St. Joseph, Mo 19,565
Louisville, Ky 100,753	Fall River, Mass26,766	Petersburg, Va18,950
Cleveland, O92,829	Springfield, Mass26,703	Atlanta, Ga21.789
Pittsburg, Pa86,076	Nashville, Tenn25,865	Norwieh, Ct16,653
Jersey City, N. J82,546	Covington, Kv24,505	Sacramento, Cal16,283
Detroit, Mich79,577	Salem, Mass24.117	Omaha, Neh16,083
Milwaukie, Wis71,440	Oniney, Ill24,053	Elmira, N. Y15,863
Albany, N. V 69,422	Manchester, N. H., 23,536	Gloncester, Wass15,389
Providence R I 68 904	Harrishurg Pa 93 104	Cohoes, N. Y15,357
Rochester N V 62 386	Trenton N J 22 874	New Albany, Ind15,396
Allegheny Pu 53 180	Peoria III 99 849	New Brunswick, N. J.15,058
Richmond Va 51 039	Eveneville Ind 91 830	Terre Haute, Ind16,103
You Haven (4 50 840	Now Podford Muse 91 290	Bangor, Me18,289
Charleston C Cl. 40 050	Owners N. V. 90.010	Name of E
		Newport, Ky15,087
1 roy, N. 146,463	Enzabeth, N. J20,832	Grand Rapids, Mich. 16,507
Syracuse, N. Y 43,051	Laneaster, Pa20,233	Augusta, Ga15,389
Worcester, Mass41,105	Savannah, Ga28,235	Burhington, Vt14,387
		Alexandria, Va13,570
		Sandusky, O13,000
		Lewiston, Me,, 13,600
Hartford, Ct37,180	Davenport, Ia20,038	, , , , , , , , , , , , , , , , , , , ,
Indianapolis, Ind 36,565	St. Paul, Minn 20,031	

LUCK AT LAST.

You think I'm nervous, stranger? Well, I am. If 'twa'n't for making silly people talk, I'd get right off this pokish train and walk From here to where I'm going—Amsterdam.

That's where I live, you see. As for Lacrosse—
(Excuse me, neighbor, I must talk or bust)—
Since I've been there it's three years certain, just:
And now to laugh or cry is just a toss.

"Married?" Why, yes, that's where it is, you see; I've telegraphed her I was strong and well, And coming to her; but I didn't tell That I was rich. I thought I'd let that be,

It's too good luck, this is, to last, you know, And, stranger, if I wasn't kind of rash, I'd bet my bottom dollar that we smash Before—but, pshaw, excuse me, I'll go slow.

You see, when we were married, Sue and I, I was a good mechanic, and not poor Until I struck it, as I reckoned, sure, In an invention I was working sly.

All I could make went into that concern; And people called me crazy for it too, And said I'd better stick to what I knew; But folks will talk, and have lived to learn.

In all this world I had but one friend then, But she stood by me nobly, through and through, And said 'twould come out right at last, she knew— One woman staunch is worth a dozen men.

'Twas tough, sometimes, though, when a loaf of bread Stood on the table—all the meal we hadI should have gone alone, quite to the bad But, through it all, my Susan kept her head

'Twas her advice that sent me off at last— She said she'd work her fingers to the bone, And live for twenty mortal years alone, Rather than give it up—thank God, that's past.

A hundred thousand and a royalty
Is what I've got for going far away;
She cheered me by her letters every day;
A million could not pay such loyalty!

She knows I'm coming; but she doesn't know That I am rich; and she will be there, too, Dressed in her best—her best, my poor, dear Sue; I'll bet a hundred 'twill be calieo!

" I'll dress her now?" You bet it!—hut go slow, This luck's a heap too good to last, I fear; I shan't believe it till I'm fairly there; The train may smash up, easy, yet, you know.

The only reason, if it don't, will be That I'm so strongly thinking that it will. I'm nervous, say you? Just a little, still The luck is none too good for Sue, you see.

Hello! we're here!—there's Sue, by all that's grand.
Stranger, excuse me, sir, but would you mind
To go ahead and tell her I'm behind?
I'm choking: see my eyes—you understand.

Janesville (Wis.) Gazette.

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WM. EDCAR SIMONDS, ATTORNEY AT LAW,

345 MAIN STREET, HARTFORD, CONN.

SOLICITOR OF

AMERICAN AND FOREIGN PATENTS.

The writer of this work, originally prompted to this profession by natural tastes, and having enjoyed thorough scientific and legal training therefor, has been engaged, for the past six years, in soliciting letters patent for inventious, in all the patent granting countries of the world, and in the conduct of patent cases in the United States Courts, with a measure of success at once surprising and gratifying.

It has been his aim, in each case he has taken before the Patent Office, to secure for the inventor **all** he was entitled to, sparing no pains to attain this end. He believes that he can safely refer, upon this point, to each one of the hundreds of inventors for whom he has acted.

While the records of the Patent Office show that fully one third of all the applications

made for patents are finally rejected, the proportion of final rejections upon applications made through this office, will hardly amount to one tenth. All specifications, and other papers for foreign patents, have been fully completed, ready for filing in the office for which they were designed, under his own hand—barring, sometimes, a translation—and in his own office, the significance of which statement can only be fully appreciated by a solicitor.

As in the past, so in the future, it will be his aim to render a perfect service to inventors, as regards skill, promptness, and fidelity, striving to make each case, as it comes under his hand, more perfect, if possible, than the last.

All business connected with preliminary examinations, caveats, applications for patents, reissues, interferences, extensions, disclaimers, appeals, assignments, contracts, searches, opinions, infringements, or other patent matters whatsoever, he contracts to do in the same manner. As most inventors find, sooner or later, good work in patent matters is worth everything, poor work worse than worthless.

The writer does not offer himself as a competitor, in the matter of prices, with those solicitors who take work on any terms they can get, yet he knows that his charges are much less than those of other solicitors who are competent to perform, and do perform the same quality of work.

He will be pleased, upon request made, to forward a pamphlet circular, which is explicit in the matter of terms, etc., both for home and foreign patents.

If you have a difficult or rejected case, you are invited to submit it for his opinion as to the chances of success, which opinion will be given, usually, without charge, and a fee named upon which the case will be undertaken.

With reference to suits at law upon patents, attention is drawn to the following professional card:

W. E. SIMONDS,

ATTORNEY AT LAW,

Practitionex in the U. S. Courts.

PATENT CASES A SPECIALTY.

ERRATA.

On page 12, line 2, the words "as low" should follow the word "fixed."

On page 25, line 10, "proportion" should read "proposition." $\,$

On page 47, under head of "Undivided Interests," the words "that it is probably lawful," should be inserted immediately after the word "understand," in line 2.

On page 48, line 15, the word "use," should follow the word "MAKE."

On page 74, line 9, omit the word "such."

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